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Contrastive Analysis of General British English and River Plate Spanish Consonantal and Vowel Sounds.

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Ex humilis potens
(Horace III, 30)

GENERAL INTRODUCTION.

This work is the result of ten years of research and more than ten years of testing and testing the results again and again as well as checking and checking all of them also again and again. During all these years the difficulties for River Plate Spanish speakers have been the same. The influence of the media has complicated the scope of learning a second language with a more or less certain accuracy. Songs, films, T.V. news have become a real danger as regards pronunciation. Traditionally English had been taught following the patterns of Received Pronunciation . In general good results had been achieved till American English started being more popular. Everybody tried to imitate them making a terrible confusion between both of them. The result was a painful hybrid English that does not sound English at all. That is why it does not matter which version one wants to learn, but only one should be followed in the so difficult process of learning English as a foreign language.

The principal objective with this work is to help teachers of phonetics to introduce the subject already bearing in mind the different hierarchies of difficulties. These difficulties have been specifically drawn through contrast.

General British English, the last rendering when referring to standard pronunciation of English, and River Plate Spanish are two languages sharing very few similar sounds.

The different hierarchies of difficulties have been prepared considering identification and discrimination tests. Here only results have been included so as to make teaching easier and not highly scientific.

When dealing with vowel sounds everything seems to be far more difficult than the traditional classification following the arching model. I understand that this may be so but as I have proved the arching model is full of inconsistances and irregularities and it lacks scientific basis. The classification according to the four constriction locations has a solid scientific basis. Perhaps the muscles of the tongue and the description considering the formants are difficult to remember but this may be avoided by merely classifying vowel sounds into palatal, velar, low pharyngeal, velopharyngeal and if they are tense or lax. Being vowel sounds more difficult to be understood and reproduced, I generally teach consonantal sounds first as they are purely considered from the articulatory point of view.

When analysing the consonantal sounds, I have followed the traditional classification of them considering the manner of articulation, the place of articulation, the vibration or the lack of vibration of the vocal cords, and the degree of breath and the muscular energy involved in their production. In this work I have tried to contrast all the consonantal sounds, one by one, between General British English and River Plate Spanish. The results of this contrast is what really counts. I have proved that a very low percentage of the consonantal sounds are identical in both languages. I have also wanted to point out those sounds that exist in only one of the languages. Finally I have also stated a hierarchy of difficulties of all of them considering River Plate Spanish speakers. Plosive sounds are introduced and analysed first due to the high degree of difficulty in their production. The rest of the consonantal sounds may be taught indistinctively as they more or less share the same degree of difficulties. Semivowels are introduced within consonantal sounds as a link with the teaching of vowel sounds.

This work has been carried out bearing in mind both the scientific and the practical sides of the research. For this reason I have proposed only exercises for the application and practice of the sounds that are for a River Plate Spanish speaker, according to the results, difficult to produce. They have been divided into two sections. The first one meant to reproduce the sound from monosyllables in isolation to polysyllables; the second one to practice the same sound in a complete utterance. All vowel and plosive sounds have been included; the sounds that have identical renderings have not been included.

The symbols used in this work are those accepted by the International Phonetic Association of England. Practically all the results of this research have been personally discussed with members of this Association and of the Department of Philology and Linguistics of University College, London, England, especially with Dr. A. C. Gimson and Dr. D. B. Fry.

I sincerely hope that this work of over twenty years will help my colleagues as has helped and does help myself in my classes.

GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH

CONSONANTAL SOUNDS.

GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH PLOSIVE SOUNDS

INTRODUCTION

The plosive sounds have been in all cases studied and contrasted from an articulatory point of view. We have decided that this viewpoint is far more comprehensible for teaching purposes than the acoustic one. Each sound is described considering the place of articulation, the vibration or non vibration of the vocal cords (voiced/voiceless) and the degree of breath and muscular energy (fortis/lenis). All of them are treated in minimal pairs.

For the General British English plosives we have used the traditional description given by the International Phonetic Association, for the River Plate Spanish plosives we have given a practical classification based on the already studied English sounds.

PROCEDURE

Two lists have been prepared. One of them containing General British English plosives in two main positions, initial and medial with all the possible combinations and the other containing River Plate Spanish plosives also in two positions and with the possible combinations. Both lists have been recorded by native speakers in a tape. The General British English examples have been read first, after an interval of 10 seconds the River Plate Spanish ones have been read. Between each sound there has been an interval of 25

seconds and 20 seconds between each position. It has been recorded in the order voiceless/voiced till the four plosive sounds have been covered. The recording has been made in the Language Laboratory of the School of Modern Language at Universidad del Salvador.

RESULTS

Both examples in G.B. English and R.P. Spanish have been introduced in pairs, studied and contrasted. As a result we could see that the most obvious difference between the voiceless plosive sounds of the two languages is the phonetic feature of aspiration and the complete lack of aspiration present in the production of the G.B. English voiceless in certain positions and the complete lack of aspiration in the R.P. Spanish plosives.

In the case of / t / and / d / sounds there is another noticeable difference that is the place of articulation. In G.B. English / t / and / d / are alveolar, in R.P. Spanish / t̪ / and / d̪ / are dental.

As for all voiced plosive sounds the main difference between both languages appears to be the use of the fricative homorganic allophones in mid position in R.P. Spanish.

Exercises for the application of the R.P. English plosives have been provided for Spanish speakers students to practise all them in all positions.

OBSERVABLE DIFFERENCES BETWEEN GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH PLOSIVE SOUNDS

ENGLISH	SPANISH
/ t̪ /	/ t̪ /
Description: Alveolar - Voiceless - Fortis.	Description: Dental - Voiceless - Fortis

Initial Position

a) / tʰɪn̥ / ***tin***	***a)*** / t̪an̥ / ***tan***
Fully aspirated because it is in a monosyllable in isolation; it is followed by a wowel and not preceded by the alveolar voiceless fortis fricative / s /.	There is no aspiration whatsoever.

b) */ˈtʰiːʃə/* ***teacher*** Fully aspirated because it is in a stressed position followed by a vowel and not preceded by the alveolar voiceless fortis fricative / s /.	***b)*** */ˈt̪an̪t̪o/* ***tanto*** ditto a).
c) */tʸəˈmɒrəʊ/* ***tomorrow*** Partially aspirated because it is in an unstressed position.	***c)*** */t̪eˈlefono/* ***teléfono*** ditto a).
d) */ˈtʸɾeɪnɪŋ/* ***training*** Partially aspirated because it is in a stressed position followed by the alveolar voiced lenis intermittent / ɾ /, and not preceded by the alveolar voiceless fortis fricative / s /; the partial aspiration is manifested through the devoicing of the alveolar undergoing a process of similitude.	***d)*** */ˈt̪ɾen̪/* ***tren*** ditto a) and shares the devoicing of the alveolar voiced lenis intermittent / ɾ /.

e) /tʸrə'mendəs/ ***tremendous***	e) /tr̥e'menʤo̥/ ***tremendo***
Partially aspirated because it is in an unstressed position. The lack of stress partially aspirates the plosive voiceless sound and not because it is followed by the alveolar voiced lenis intermittent / ɾ / also devoiced but in this position due to a process of progressive assimilation. It is not marked with the corresponding diachritic of devoicing [̥] in order to differentiate it from the case of only stressed position. (see d).	ditto a) and d).

1) /tʃ/ => /ʃ/ 1) /tʷʲuːzdɪ/ => 2) /ʃuːzdɪ/ ***Tuesday*** 1) Partially aspirated because it is in a stressed position followed by the palatal voiced lenis semivowel /j/ and not preceded by the alveolar voiceless fortis fricative /s/; the partial aspiration is manifested through the devoicing of the palatal semivowel undergoing a process of similitude. 2) /tʃ/ may be affricated through a process of coalescent assimilation, particularly in stressed position.	1) /tʲjempo/ ***tiempo*** ditto a) and shares the devoicing of the palatal voiced lenis semivowel /j/.

g) /ˈtʷweɲtʷɪ/ *twenty* Partially aspirated because it is in a stressed position followed by the labiovelar voiced lenis semivowel /w/ and not preceded by the alveolar volceless fortis fricative /s/; the partial aspiration is manifested through the devoicing of the labiovelar semivowel undergoing a process of similitude.	g) /ˈt̪weht̪o/ *tuesto* ditto a). and shares the devoicing of the labiovelar voiced lenis semivowel /w/.

Mid Position

a) /əˈtʰɜ:nɪ/ attorney Fully aspirated because it is in a stressed position not preceded by the alveolar voiceless fortis fricative / s / and followed by a vowel.	***a) /aˈt̪aðɑ/ atado*** There is no aspiration in any position.
b) /ˈʌtʸə / utter Partially aspirated because it is in an unstressed position.	***b) /ˈat̪o/ ato*** ditto a)
c) /stʸɑ:tʸɪd̥˺/ started Partially aspirated because it is in a stressed position preceded by the alveolar voiceless fortis fricative / s /.	***c) /st̪-/*** Nonexistent as initial cluster. (see NB2).

d) /ˈstʸreɪndʒ̊/ strange Partially aspirated because it is in a stressed position preceded by the alveolar voiceless fortis fricative / s /. The latter produces the partial aspiration and not the following alveolar voiced lenis intermittent that is also devoiced due to progressive assimilation but not marked with the corresponding diachritic for devoicing [∘] in order to differentiate it from the case of stressed position only followed by it (see e).	***d) /st̪ɾ/*** Nonexistent as initial cluster. (see NB2).
e) /əˈtʸɾ̥æʔt/ attract Partially aspirated because it is in a stressed position followed by the alveolar voiced lenis intermitent /ɾ/; the partial aspiration is manifested through the devoicing of the alveolar undergoing a process of similitude.	***e) /aˈt̪ɾ̥as/ atrás*** ditto a) and shares the devoicing of the alveolar voiced intermittent but marked with the corresponding diachritic for devoicing [∘].

f) /ˈpʰɔːtʸɾeɪt̚/ ***portrait*** Partially aspirated because it is in an unstressed position. The lack of stress partially aspirates the plosive voiceless sound and not because it is followed by the alveolar voiced lenis intermittent / ɾ / that although it is also devoiced but in this position is due to the process of progressive assimilation affecting the vibration of the vocal cords. It is not marked with the corresponding diachritic of devoicing [◌̥] in order to differentiate it from the case of only stressed position (see e).	f) /ˈletɾ̥as/ ***letras*** ditto a) and e).
g) /ˈæstʸɾɪd̥/ ***Astrid*** Partially aspirated because it is in an unstressed position. The following alveolar voiced lenis intermittent /ɾ/ though devoiced due to the process of progressive asimilation is not marked with the corresponding diachritic for devoicing [◌̥] in order to differentiate it from the case of stressed position only followed by it (see e).	g) /ˈahn̥ɾ̥o/ ***astro*** ditto a) and e). For River Plate Spanish the alveolar voiceless fortis fricative / s / when followed by the dental voiceless fortis plosive /n̪̥/ is replaced by the glottal voiceless fortis fricative allophonic variant /h/.

h) /əˈtˡˡ̥æn̥tʸɪkˀ/ ***Atlantic (1)*** Fully unanspirated because it is in a stressed position followed by the alveolar voiced lenis lateral. It has lateral release and the fully unaspiration is manifested through the devoicing of the lateral undergoing a process of similitude.	*h)* /əˈtˡˡ̥ən̥tɪkˀ/ ***Atlántico (1)*** ditto a). Shares the lateral release and the devoicing of the alveolar voiced lateral.
/ˈætˡˡ̥əs/ ***Atlas (2)*** Fully unaspirated because it is in an unstressed position followed by the alveolar voiced lenis lateral, though devoiced but not marked to differentiate it from the stressed position.	/ˈatˡˡ̥əs/ ***Atlas (2)*** ditto G. B. English but marking the corresponding diachritic of devoicing / ̥ / of the alveolar voiced lenis lateral.
i) /ˈpʰæt̃n̥̊/ ***pattern*** Fully unaspirated because it is in an unstressed position followed by the syllabic alveolar voiced lenis nasal / n̥ /. It has nasal released.	***i) Nonexistent.***
j) / æˈkˢs / ***acts*** Elided because it is the mid element in a consonantal cluster of three elements.	***j) Nonexistent***

Final Position

a) /pʰæt̚/ ***Pat*** Fully unaspirated and unreleased. There is no audible release stage of plosives in final position.	Nonexistent final position for /t̪/ in R.P. Spanish, only for certain foreign words but normally in rapid and colloquial speech the sound tends to be elided.
b) /æʔt̚/ ***apt*** ditto a).	
c) /æʔt̚/ ***act*** ditto a).	
d) /lɑ:ftˀ/ ***laughed*** ditto a).	
e) /pʰɑ:stˀ/ ***past*** ditto a).	
f) /wɒʃtˀ/ ***washed*** ditto a).	
g) /wɒʧtˀ/ ***watched*** ditto a).	

NB1

/ t / is the fortis alveolar plosive with the highest range of difficulty for a R.P. Spanish speaker mainly because of the different places of articulations and the typical English phonetic feature of aspiration. There will always be a tendency to dentalize the sound.

NB2

/ st / initial cluster does not exist in R.P. Spanish and the students tend to introduce a static palatal vowel sound / e /; this intrusive sound is called "epenthetic" and not only interferes in the correct production of this initial cluster but also gives a completely different quality to the alveolar voiceless fortis fricative / s / which will be assimilated regressively by the dental voiceless fortis plosive / t̪ /.

e.g. stay /stˠeɪ/ ======> /ehtˌeɪ/

stand /stˠænd̪/ ======> /ehˈtˌand̪/

/ d / Description: Alveolar - Voiced - Lenis	/ d̪ / Description: Dental - Voiced - Lenis

Initial Position

a) /d̥ɒg̊˞/ ***dog*** Partially devoiced in initial position.	**a)** /d̥a/ ***da*** Partially devoiced in initial position. Same as in G.B. English but dental.
b) /ˈd̥ɒlɘz̥/ ***dollars*** ditto a). The stressed syllable does not change initial / d / at all.	**b)** /ˈd̥olares/ ***dólares*** ditto a). The stressed syllable does not change /d̥̪/ initial at all.
c) /d̥aɪˈreʔt̚/ ***direct*** ditto a)	**c)** /d̥esiˈmal̥/ ***decimal*** ditto a)
d) /d̥reɪn̥/ ***drain*** It is partially devoiced because of the position so that at the same time it partially devoices the alveolar voiced lenis intermittent / ɣ /. This last variant is not marked with a diachritic when transcribed to avoid overloading.	**d)** /ˈd̥rama/ ***drama*** ditto G.B. English.

e)1) /dʧ/ ===> (2) /dʒ/ /d͡ʒuː/ ===> /dʒuː/ **due** **1)** Partially devoiced in initial position. It also partially devoices the palatal voiced lenis semivowel /ʝ/ but it is not marked to avoid overloading. **2)** /dʧ/ may also be affricated undergoing a process of coalescent assimilation.	e) /d͡ʝos/ **Dios** ditto G.B.English case 1.
f) /d͡ʷelɪŋ/ **dwelling** Partially devoiced in initial position, it also partially devoices the labiovelar voiced lenis semivowel /ʍ/ but it is not marked to avoid overloading.	g) /d͡ʷelo/ **duelo** ditto G. B. English

NB1:

Plosive /d̪/ is restrictively used in initial position in words in isolation or words initial in a sentence. It is most of the times replaced by the allophonic fricative variation /ð/.

Mid Position

a) */ə'ðɔ: /* ***adore*** Fully voiced because it is in an intervocalic position. It is not the stress that produces full vibration of the vocal cords.	***a)*** */a'ðoro/* ***adoro*** Nonexistent in mid position; / d̠ / is replaced by the allophonic fricative dental voiced lenis variation / ð /.
b) */ˈlæ ð ə / ladder* ditto a).	***b)*** */ˈna ð a/ nada* ditto a).
c) */ ma d̬̈ r ɪ d̠̚ / Madrid* It is partially devoiced because it is not in an intervocalic position. At the same time it partially devoices the alveolar voiceless fortis intermittent / ϒ /. This last variant is not marked when transcribed to avoid overloading.	***c)*** */ ma'ðri d̠̚ / Madrid* ditto a).

***d)* / ˈsæd̥l̥ / saddle** It is partially devoiced because it is not in intervocalic position. It has lateral release because it is followed by a lateral sound that though partially devoiced it is not marked to avoid overloading.	***d)*** Nonexistent.
***e)* /ˈsʌd̥n̩ lɪ / suddenly** It is partially voiced because it is not in intervocalic position. It has nasal released because it is followed by a nasal sound that though partially devoiced it is not marked to avoid overloading.	***e)*** Nonexistent.
***f)* / ˈseɫd̥əm̥/ seldom** Partially devoiced because it is not in an intervocalic position.	***f)* /ˈsald̪o/ saldo** The plosive dental voiced lenis / d̪ / is used when it is preceded by the voiced lenis alveolar lateral / l / and it partially keeps the vibration of the vocal cords.

g) /ˈsʌnd̥ɪ / ***Sunday*** Partially devoiced because it is not in an intervocalic position.	***g)*** /ˈsenn̥da / ***senda*** The plosive dental voiced lenis is used when it is preceded by the voiced lenis alveolar nasal /n/ and it partially keeps the vibration of the vocal cords.
h) /ˈhæm b̥æg̊/ ***handbag*** When it is the central element of a three element consonantal cluster it may be elided altogether.	***h) Nonexistent.***
i) Nonexistent.	***i)*** /aˈðweɲo/ ***adueño*** ditto a).
j)1) /d̥ʝ / ===> (2) /dʒ / /ɪnˈd̥ʝva / ===> /ɪnˈdʒva / ***endure*** ***1)*** Partially devoiced because it is not in an intervocalic position. The following palatal voiced lenis semivowel /ʝ / is also partially devoiced but it is not marked to avoid overloading. **2)** /d+ʝ / may also be affricated undergoing a process of coalescent assimilation.	***j)*** /aˈð̞ʝos/ ***adios*** ditto a).

Final Position

a) */ b ɔ d̚ /* ***bad*** Fully devolced and unreleased in final position.	***In River Plate Spanish there are two posibilities:*** ***I)*** To elide the sound altogether e.g. */ m a l d̚ a */ ***maldad*** ***II)*** or fully devoice and unrelease it e.g. */ b o n d̚ a d̚ */ ***bondad***
b) */ ˈs ɜ: v d̚ /* ***served*** ditto a).	
c) */ b r i: ʒ d̚ /* ***breathed*** ditto a).	
d) */ k l ɔ z d̚ /* ***closed*** ditto a).	
e) */ dʒ ʌ dʒ d̚ /* ***juged*** ditto a).	

NB:

/ $\underset{n}{d}$ / is the lenis plosive with the highest range of difficulty for a River Plate Spanish speaker because of the restricted positions where it is used in R.P. Spanish and because there will always be a tendency to dentalize the sound and use the homorganic fricative allophone.

/ p /	/ p /
Description: Bilabial - Voiceless - Fortis.	Description: Bilabial - Voiceless - Fortis.

Initial Position

a) / p^{h} *ɪn/ pin* Fully aspirated because it is in a monosyllable in isolation; it is followed by a wowel and not preceded by the alveolar voiceless fortis fricative / s /.	*a) /* p *a n/ pan* There is no aspiration whatsoever.

e) /pʸra'kˡ|erm/ ***proclaim*** Partially aspirated because it is in an unstressed position. The lack of stress partially aspirates the plosive voiceless sound and not because it is followed by the alveolar voiced lenis intermittent /ɾ/ that it is also devoiced but in this position due to a process of progressive assimilation. It is not marked with the corresponding diachritic of devoicing [◦] in order to differentiate it from the case of only stressed position. (see d).	e) /pɾe'laðo / ***prelado*** ditto a) and d).
f) /pˡ|eɪtˀ/ ***plate*** Fully unaspirated because it is followed by the alveolar voiced lenis lateral; it has lateral release. The fully unaspiration is manifested through the devoicing of the lateral undergoing a process of similitude.	f) /'pˡ|a t̪o/ ***plato*** ditto a) and shares the devoicing of the alveolar voiced lenis lateral and the lateral release.

g) */pʰʲʊə/* ***pure*** Partially aspirated because it is in a stressed position followed by the palatal voiced lenis semivowel /ʝ/. The partial aspiration is manifested through the devoicing of the semivowel.	***g)*** */pʲoxo/* ***piojo*** ditto a) and shares the devoicing of the palatal voiced lenis semivowel /ʝ/.
h) Nonexistent	***h)*** */pʷehto/* ***puesto*** ditto a) and devoices the labiovelar voiced lenis semivowel /w/.

Mid Position

a) */əˈpʰɪə/* ***appear*** Fully aspirated because it is in a stressed position not preceded by the alveolar voiceless fortis fricative /s/ and followed by a vowel.	***a)*** */aˈpoðo/* ***apodo*** There is no aspiration in any position.
b) */ˈʌpʸə/* ***upper*** Partially aspirated because it is in an unstressed position.	***b)*** */ˈipo/* ***hipo*** ditto a)

c) / sp^{y}aI / **spy** Partially aspirated because it is in a stressed position preceded by the alveolar voiceless fortis fricative / s /.	c) /sp - / Nonexistent as initial cluster (see NB2).
d) /sp^{y}reI / **spray** Partially aspirated because it is in a stressed position preceded by the alveolar voiceless fortis fricative / s /. The latter produces the partial aspiration and not the following alveolar voiced lenis intermittent / ɾ / that is also devoiced due to progressive assimilation but not marked with the corresponding diachritic for devoicing [̥] in order to differentiate it from the case of stressed position only followed by it (see e).	d) / sp ɾ-/ Nonexistent as initial cluster (see NB2).

e) / kʸam̥ˈpʸr̥es / ***compress*** Partially aspirated because it is in a stressed position followed by the alveolar voiced lenis intermittent / ɾ /; the partial aspiration is manifested through the devoicing of the alveolar undergoing a process of similitude.	e) / aˈpr̥emjo / ***apremio*** ditto a) and shares the devoicing of the alveolar voiced lenis intermittent / ɾ /.
f) / ˈeɪpʸrɪt̥ / ***April*** Partially aspirated because it is in an unstressed position. The lack of stress partially aspirates the plosive voiceless sound and not because it is followed by the alveolar voiced lenis intermittent / ɾ / that although also devoiced but in this position due to a process of progressive assimilation affecting the vibration of the vocal cords. It is not marked with the corresponding diachritic of devoicing [◦] in order to differentiate it from the case of only stressed position (see e).	f) / ˈkom̥pr̥a / ***compra*** ditto a). Shares the devoicing of the alveolar voiced lenis intermittent / ɾ / but marked with the corresponding diachritic of devoicing [◦].

g) */əˈpˡˌaɪ/* ***apply*** Fully unaspirated because it is in a stressed position followed by the alveolar voiced lenis lateral. It has lateral release. The unaspiration is manifested through the devoicing of the lateral.	***g)*** */aˈpˡˌiko/* ***aplico*** ditto a) and shares with G. B. English the lateral release and the devoicing of the lateral.
h) */ˈæpˡɪkʲəˌnt̚/* ***applicant*** Fully unaspirated because it is in an unstressed position followed by the alveolar voiced lenis lateral, though devoiced but not marked to differentiate it from the stressed position.	***h)*** */komˌpˡˌeˈt̪aɾˌr/* ***completar*** ditto G. B. English but marking the corresponding diachritic of devoicing [ˌ] of the alveolar voiced lenis lateral.
i) */ɪkˢsˈpˡlɛɪŋ/* ***explain*** Fully unaspirated because it is in a stressed position preceded by the alveolar voiceless fortis fricative */ s /* and followed by the alveolar voiced lenis lateral. The lateral sound is devoiced but not marked to differentiate it from the stressed position not preceded by the alveolar voiceless fortis fricative */ s /*.	***i) Nonexistent.***

j) /ʌp̃məʊst̪/ ***upmost*** Fully unaspirated and unreleased because it is followed by the bilabial voiced lenis nasal /m/ which makes it has nasal release. It may also be replaced by the glottal voiceless fortis plosive /ʔ/.	*j) Nonexistent.*

Final Position

a) /tʰɒp̚/ ***top*** Fully unaspirated and unreleased. There is no audible release stage of plosives in final position.	Nonexistent final position for /p/ in R.P. Spanish only for certain foreign words but normally in rapid and colloquial speech the sound tends to be elided.
b) /wɒsp̚/ ***wasp*** ditto a).	

NB1:

The bilabial voiceless fortis plosive / p / is difficult for R.P. Spanish speakers only because of the aspiration in G.B. English. The common and noticeable mistake is to unaspirate it in positions where it is fully aspirated.

b) / ˈpʰiːɬʸə / **Peter** Fully aspirated because it is in a stressed position followed by a vowel and not preceded by the alveolar voiceless fortis fricative / s /.	**b)** / ˈpena / **pena** ditto a).
c) / pʸəˈzɪʃn̥ / **position** Partially aspirated because it is in an unstressed position.	**c)** / peˈlu ka / **peluca** ditto a).
d) / pʸɾ̥es / **press** Partially aspirated because it is in a stressed position followed by the alveolar voiced lenis intermittent / ɾ /, and not preceded by the alveolar voiceless fortis fricative / s /; the partial aspiration is manifested through the devoicing of the intermittent undergoing a process of similitude.	**d)** / ˈpɾ̥ensa / **prensa** ditto a) and shares the devoicing of the alveolar voiced lenis intermittent / ɾ /.

NB2:

/ sp / initial cluster does not exist in R.P. Spanish and the student tends to introduce a static palatal vowel sound / e /; this epenthetic sound interferes in the correct production of this initial cluster giving a different quality to the alveolar voiceless fortis fricative / s / which will be assimilated regressively by the bilabial voiceless fortis plosive / p /.

e.g.

speak / sp^{y}i: k˺ / =====> / eɸ'pik˺ /

spy / sp^{y}aɪ / =====> / eɸ'paɪ̯ /

/ b /	/ b /
Description: Bilabial - Voiced - Lenis.	Description: Bilabial - Voiced - Lenis.

Initial Position

a) / b̥ɔɪ / boy	*a) / b̥os / vos*
Partially devoiced in initial position.	Partially devoiced in initial position.

b) / ˈb̥ɔɪlɪŋ / ***boiling*** ditto a). The stressed syllable does not change initial / b / at all.	***b)*** / ˈb̥oɪso / ***boiso*** ditto a). The stressed syllable does not change initial / b / at all.
c) / b̥əˈkʰɒz̥ / ***because*** ditto a).	***c)*** / b̥eˈsɛrro / ***becerro*** ditto a).
d) / b̥reɪn̥ / ***brain*** It is partially devoiced because of the position so that at the same time it partially devoices the alveolar voiced lenis intermittent / ɾ /. This last variant is not marked with a diachritic to avoid overloading.	***d)*** / ˈb̥rama / ***brama*** ditto G. B. English.
e) / b̥ˡleɪm̥ / ***blame*** Partially devoiced in initial position. It has lateral release because it is followed by the alveolar voiced lenis lateral. It partially devoices the alveolar voiced lenis lateral though not marked to avoid overloading.	***e)*** / ˈb̥laŋko / ***blanco*** ditto G.B. English.

f) / b̥ʝu:t̠ʲɪ / **beauty** Partially devoiced in initial position. It also partially devoices the palatal voiced lenis semivowel / ʝ / though not marked to avoid overloading.	f) / ˈb̥ʝexo / **viejo** ditto G.B. English
g) Nonexistent.	***g)*** / ˈb̥weno / **bueno** Partially devoiced in initial position. Though the following labiovelar voiced lenis semivowel is also partially devoiced, it is not marked to avoid overloading.

NB:

/ b / in R. P. Spanish is restrictively used in initial position of words in isolation or word initial in a sentence. It is most of the times replaced by the bilabial voiced lenis fricative / β / as an allophonic variant.

Mid Position

a) */əʊ ˈbeɪ / obey* Fully voiced because it is in an intervocalic position. It is not the stress that produces vibration of the vocal cords.	***a)*** Nonexistent in mid position. / b / is replaced by the allophonic fricative bilabial voiced lenis variation / β / e.g. */a ˈβaxo / abajo*
b) */ˈæ bɪ / abbey* ditto a).	***b)*** */ˈa βa / haba* ditto a).
c) */ˌɪm ˈbred / inbred* It is partially devoiced because it is not in an intervocalic position.	***c)*** */ ˈka βra / cabra* ditto a).
d) */ˈtʰeɪ bl̥ˈ / table* Partially devoiced because it is not in an intervocalic position. It has lateral release because it is followed by the alveolar voiced lenis lateral, also partially devoiced, but not marked to avoid overloading.	***d)*** */ˈka βle / cable* ditto a).

e) /'sʌb̪marɪ:o̥/ **submarine** Partially devoiced because it is not in intervocalic position. It is completely unreleased and nasalized because of the following bilabial voiced lenis nasal.	e) /sußma'rino/ **submarino** ditto a).
f) /'et̪b̪əv/ **elbow** Partially devoiced because it is not in intervocalic position	f) /alb̪a'aka/ **albahaca** The plosive bilabial voiced lenis /b/ is used when it is preceded by the alveolar voiced lenis lateral / l / and it partially keeps the vibration of the vocal cords.
g) /'sɪmb̪alaɪz̥/ **simbolize** Partially devoiced because it is not in intervocalic position.	g) /'t̪amb̪o/ **tambo** The plosive bilabial voiced lenis is used when it is preceded by the voiced lenis bilabial nasal / m / and it partially keeps the vibration of the vocal cords.

Final Positions

a) / sɒb̚ / *sob* Fully devoiced and unreleased in final position.	Nonexistent final position for / b / in R.P. Spanish only in foreign words where the sound is most of the times completely elided.

NB:

The bilabial voiced lenis plosive / b / is difficult for the R.P.Spanish speaker because of the restricted positions where it is used in R.P.Spanish and because there will be a tendency to use the fricative variation.

/ k / Description: Velar - Voiceless - Fortis.	/ k / Description: Velar - Voiceless - Fortis.

Initial Position

a) / kʰɪŋ / *king* Fully aspirated because it is in a monosyllable in isolation; it is followed by a wowel and not preceded by the alveolar voiceless fortis fricative / s /.	a) / kal̥ / *cal* There is no aspiration.

b) / ˈkʰe t̪ˡʲ̪ / ***kettle*** Fully aspirated because it is in a stressed position followed by a vowel and not preceded by the alveolar voiceless fortis fricative / s /.	**b)** / ˈkasa / ***casa*** ditto a).
c) / kʸan̥ˈtʰiːn̥ / ***canteen*** Partially aspirated because it is in an unstressed position.	**c)** / kon̥ˈt̪en̥t̪o/ ***contento*** ditto a).
d) / kʸɾ̥avn̥ / ***crown*** Partially aspirated because it is in a stressed position followed by the alveolar voiced lenis intermittent / ɾ /, and not preceded by the alveolar voiceless fortis fricative / s /; the partial aspiration is manifested through the devoicing of the intermittent undergoing a process of similitude.	**d)** / ˈkɾ̥ehn̥t̪a / ***cresta*** ditto a) and shares the devoicing of / ɾ /.

e) / kʸɾu:'seɪ d̥ / ***crusade*** Partially aspirated because it is in an unstressed position. The lack of stress partially aspirates the plosive voiceless sound and not because it is followed by the alveolar voiced lenis intermittent / ɾ /. It is also devoiced but in this position due to a process of progressive assimilation. It is not marked with the corresponding diachritic of devoicing [◦] in order to differentiate it from the case of only stressed position. (see d).	e) / kɾi'so l̥ / ***crisol*** ditto a).
f) / kˡ l̥ ɪ ə / ***clear*** Fully unaspirated in a stressed position due to the following alveolar voiced lenis lateral. It has lateral release. The alveolar devoiced allophone is used.	f) / 'kˡ l̥ ə ɾ ə / ***clara*** ditto a) and shares with G. B. English the lateral release and the devoiced allophonic variant of the alveolar voiced lenis lateral.

g) / kʸju:tˀ / **cute** Partially aspirated because it is in a stressed position followed by the palatal voiced lenis semivowel / j / and not preceded by the alveolar voiceless fortis fricative / s /; the partial aspiration is manifested through the devoicing of the palatal semivowel undergoing a process of simillitude.	g) / ˈkjoxko / **kiosco** ditto a) and shares the devoicing of the palatal voiced lenis semivowel / j /.
h) / kʸwestˀ / **quest** Partially aspirated because it is in a stressed position followed by the labiovelar voiced lenis semivowel / w / and not preceded by the alveolar voiceless fortis fricative / s /; the partial aspiration is manifested through the devoicing of the labiovelar semivowel undergoing a process of simillitude.	h) / ˈkwenn̥to / **cuento** ditto a) and shares the devoicing of the labiovelar voiced lenis semivowel / w /.

Mid Position

a) */ ə ˈkʰaʊn̥t̚ /* ***account*** Fully aspirated because it is in a stressed position not preceded by the alveolar voiceless fortis fricative / s / and followed by a vowel.	***a)*** */ aˈkuso /* ***acuso*** There is no aspiration in any position.
b) */ ˈpʰaːkʲɪŋ̊ /* ***parking*** Partially aspirated because it is in an unstressed position.	***b)*** */ ˈsako /* ***saco*** ditto a)
c) */ skʲeɪt̊̚ /* ***scale*** Partially aspirated because it is in a stressed position preceded by the alveolar voiceless fricative / s /.	***c)*** Nonexistent as initial cluster (see NB2).

d) */ sk^{y}ɾi:m$_{o}$ /* ***scream*** Partially aspirated because it is in a stressed position preceded by the alveolar voiceless fortis fricative */s/*. The latter produces the partial aspiration and not the following alveolar voiced lenis intermittent */ ɾ /* that is also devoiced due to progressive assimilation but not marked with the corresponding diachritic of devoicing [ₒ] in order to differentiate it from the case of stressed position only followed by it (see e).	***d)*** Nonexistent as initial cluster (see NB2).
e) */ ɪɲ$'^{y}$kɾi:s /* ***increase*** Partially aspirated because it is in a stressed position followed by the alveolar voiced lenis intermittent */ ɾ /*; the partial aspiration is manifested through the devoicing of the alveolar intermittent undergoing a process of similitude.	***e)*** */ iɲ$'$kɾepo/* ***increpo*** ditto a) and shares the devoicing of the alveolar voiced lenis intermittent but marked with the corresponding diachritic for devoicing [ₒ].

f) /ˈwɔːtəˌkʳɛs/ / **watercress** Partially aspirated because it is in an unstressed position. The lack of stress partially aspirates the plosive voiceless sound and not because it is followed by the alveolar voiced lenis intermittent /ɾ/. It is also devoiced but in this position due to a process of progressive assimilation affecting the vibration of the vocal cords. It is not marked with the corresponding diachritic of devoicing [̥] in order to differentiate it from the case of only stressed position (see e).	f) /ˈakɾ̥e/ / **acre** ditto a). Shares the devoicing of the alveolar voiced lenis intermittent but marked with the corresponding diachritic of devoicing [̥].
g) /ɪn̥sˈkɾaɪb̥/ / **Inscribe** Partially aspirated because it is in a stressed position preceded by the alveolar voiceless fortis fricative /s/. The following alveolar voiced lenis intermittent / / does not partially aspirate it. This latter is devoiced but due to a process of progressive assimilation affecting the vibration of the vocal cords. It is not marked with the corresponding diachritic of devoicing [̥] in order to differentiate it from the case of only stressed position followed by the intermittent. (see e).	g) /in̥xˈkɾ̥iβe/ **Inscribe** ditto a) and f). For R. P.Spanish the alveolar voiceless fortis fricative /s/ when followed by the velar voiceless fortis plosive /k/ is replaced by the velar voiceless fortis fricative allophonic variant /x/ undergoing a process of regressive assimilation.

h) / pʏrə'kˡl̥eɪm̥ / proclaim (1) Fully unanspirated because it is in a stressed position followed by the alveolar voiced lenis lateral. It has lateral release and the fully unaspiration is manifested through the devoicing of the lateral undergoing a process of similitude. ***/ 'd̥ʌkˡlɪŋ̊ / duckling (2)*** Fully unaspirated because it is in an unstressed position followed by the alveolar voiced lenis lateral. It has lateral release. The alveolar voiced lenis lateral is devoiced but not marked to differentiate it from the stressed position.	***h) / pɾ̥o'kˡl̥ama / proclama (1)*** ditto a) and shares the devoicing of the lateral and the lateralization. ***/ akˡl̥a'maɾ̥ / aclamar (2)*** ditto G. B. English but marking the corresponding devoicing of the alveolar voiced lenis lateral.
i) / 'æk̚mə / acme Fully unaspirated and unreleased because it is followed by the bilabial voiced fortis nasal / m /. It has nasal release. It can also be replaced by the glottal voiceless fortis plosive / ʔ /	***i)*** Nonexistent internal cluster.

j) /ˈtʰeɪk̚ŋ̩/ ***taken*** Fully unaspirated in stressed position followed by a syllabic velar voiced lenis nasal /ŋ/. It has nasal release. In this position the syllable /k̚ŋ̩/ has undergone a process of progressive assimilation: /n/ ==> /ŋ/ under the influence of /k/.	j) Nonexistent. There is no process of syllabication.
k) /ˈæk̚tʸə/ ***actor*** Fully unaspirated and unreleased because it is the first element of a stop cluster. It may also be replaced by the glottal voiceless fortis plosive /ʔ/.	k) /ˈak̚t̚o/ ***acto*** ditto a) and shares the no audible release stage.
l) /əˈkʸʝuːt̚/ ***acute*** Partially aspirated because it is in a stressed position followed by the palatal voiced lenis semivowel /ʝ/. The partial aspiration is manifested though the devoicing of the semivowel undergoing a process of simillitude.	l) /aˈkʝeto/ ***aquieto*** ditto a) and shares the devoicing of the palatal voiced lenis semivowel.

m) /ˌæ kʲ v ˈz eɪ ʃn̥/ ***accusation*** Partially aspirated because it is in an unstressed position. Though the palatal voiced lenis semivowel / j / is devoiced it is not marked to differentiate it from the stressed position.	m) /a kʲe ˈt̥a ɾ/ ***aquietar*** ditto a) and marked devoicing of the palatal voiced lenis semivowel.
n) / ɾɪ ˈkʷ wes t̻/ ***request*** Partially aspirated because it is in stressed position followed by the labiovelar voiced lenis semivowel / w /. The partial aspiration is manifested through the devoicing of semivowel undergoing a process of simillitude.	n) /a ˈkʷ eh t̥o / ***acuesto*** ditto a) and shares the devoicing of the labiovelar semivowel.
o) / ˈlɪ kʷ wɪ d̻ / ***liquid*** Partially aspirated because it is in an unstressed position. Though the labiovelar voiced lenis semivowel / w / is devoiced it is not marked to differentiate it from the stressed position.	o) / li kʷa ˈɟora / ***licuadora*** ditto a) and marking the devoicing of the labiovelar semivowel.

Final Position

a) / pʰæ k̚ / ***pack*** Fully unaspirated and unreleased. There is no audible release stage of plosives in final position.	Nonexistent final position for / k / in River Plate Spanish, only for certain foreign words but normally in rapid and colloquial speech the sound tends to be elided.
b) / ɑ:sk̚ / ***ask*** ditto a).	

NB1

The velar voiceless fortis plosive / k / is difficult for a River Plate Spanish speaker only because of the aspiration in General British English. The common and noticeable mistake is to unaspirate it in positions where it is fully aspirated.

NB2

/ sk / initial cluster does not exist in River Plate Spanish and the students tend to introduce an instrusive vowel sound / e / (epenthetic) thus changing completely the quality of the alveolar voiceless fortis fricative / s / which is assimilated regressively by / k /.

e.g.

school / skʷu:t̚ / =====> / ex'ku! /
sky / skʷaɪ / =====> / ex'kaɪ /

/ g / Description: Velar - Voiced - Lenis.	/ g / Description: Velar -Voiced - Lenis.

Initial position

a) /ɡəʊ/ **go** Partially devoiced in initial position.	a) /ɡas/ **gas** Partially devoiced in initial position.
b) /ˈɡeɪzɪŋ/ **gazing** ditto a). The stressed syllable does not change initial / g / at all.	b) /ˈgula/ **gula** ditto a).
c) /ɡɪˈtʰɑ:/ **guitar** ditto a).	c) /giˈt̪arra/ **guitarra** ditto a).
d) /ɡreɪn̥/ **grain** It is partially devoiced because of the position so that at the same time it partially devoices the alveolar voiced lenis intermittent / ɾ /. This last variant is not marked with the corresponding diachritic when transcribed to avoid overloading.	d) /ˈgrano/ **grano** ditto G.B.English.

e) /ɡˡlʌv/ ***glove*** Partially devoiced because of the position. It has lateral release because it is followed by the alveolar voiced lenis lateral also partially devoiced but not marked to avoid overloading.	e) /ɡˡlaɪal/ ***glacial*** ditto G.B.English.
f) /ɡʷeɲ/ ***Gwen*** Partially devoiced in initial position. Though the labiovelar voiced lenis semivowel is also partially devoiced, it is not marked to avoid overloading.	f) /ɡʷaɲte/ ***guante*** ditto G. B. English.

NB1

In River Plate Spanish the velar voiced lenis plosive / ɡ / is restrictively used in initial position of words in isolation or words initial in a sentence. It is most of the times replaced by the velar voiced lenis fricative allophonic variation / ɣ /.

Mid Position

a) */ ə'gəʊ /* ***ago*** Fully voiced because it is in an intervocalic position. It is not the stress that produces full vibration of the vocal cords.	***a)*** Nonexistent in mid position. */g/* is replaced by the allophonic fricative homorganic voiced lenis variation */ɣ/*. */'aɣo/* ***hago***
b) */'pʰɪgɪ / piggy*** ditto a).	***b)*** */'paɣo/ pago*** ditto a).
c) */ə'gri: / agree*** It is partially devoiced because of the position and at the same time it partially devoices the alveolar lenis intermittent */ ɾ /* though not marked to avoid overloading.	***c)*** */'aɣro/ agro*** ditto a).
d) */'i:gl̥ / eagle*** It is partially devolced because it is not in an intervocalic position. it has lateral release because it is followed by a lateral sound.	***d) Nonexistent.***

e) /ˈɪgˡlu:/ ***Igloo*** Partially devoiced because it is not in an intervocalic position. It has lateral release and though the following alveolar voiced lenis lateral is also partially devoiced it is not marked to avoid overloading.	e) /iˈgˡlu/ ***Iglù*** ditto a).
f) /ˈd̥ɪgnɪtʸɪ/ ***dignity*** Partially devoiced because it is not in intervocalic position. It is completely unreleased and nasalized because of the following alveolar voiced lenis nasal /n/. It can also be replaced by a glottal voiceless fortis plosive /ʔ/.	f) /ˈd̥ignɔ/ ***digno*** ditto a).
g) /ˈmʌŋgrəl/ ***mongrel*** Partially devoiced because it is not in an intervocalic position.	g) /ˈpɔŋgo/ ***pongo*** The velar voiced lenis plosive /g/ is used when it is preceded by the velar voiced nasal lenis allophone /ŋ/ and it partially keeps the vibration of the vocal cords.

Final Position

a) / dɔg / ***dog*** Fully devoiced and unreleased in final position.	Nonexistent final position for / g / in River Plate Spanish only in foreign words where the sound is most of the times completely elided .

NB:

The velar voiced lenis plosive / g / is difficult for the River Plate Spanish speaker because of the restricted positions where it is used in River Plate Spanish and because there will be a tendency to replace it by the fricative homorganic variation.

HIERARCHY OF DIFFICULTIES FOR A RIVER PLATE SPANISH SPEAKER IN THE PRODUCTION OF GENERAL BRITISH ENGLISH PLOSIVE CONSONANTAL SOUNDS.

1. /t/ Alveolar voiceless fortis.
   /d/ Alveolar voiced lenis.

2. /p/ Bilabial voiceless fortis.
   /b/ Bilabial voiced lenis.

3. /k/ Velar voiceless fortis.
   /g/ Velar voiced lenis.

NB1:

In all voiceless fortis plosives the main difficulty in their production is the phonemic characteristic of aspiration in General British English nonexistent in River Plate Spanish. The alveolar voiceless fortis tends to be dentalized under the influence of the dental River Plate Spanish sound.

NB2:

In all voiced lenis plosives the main difficulty in their production is the tendency to use a homorganic fricative in mid position as in River Plate Spanish. The alveolar voiced fortis is also dentalized under the influence of the dental River Plate Spanish sound.

2- /d/

2.a.-

door	leader	needle	bid
dream	needless	idle	card
day	Madrid	middle	board
dry	madman	muddle	rude
dear	order	puddle	heard
drive	goodness	saddle	raid

2.b.-

- He laid the deed in the drawer of the desk.
- Drive the duck down to the pond.
- Don't tread dirt into the drawing room.
- He was driving dangerously and couldn't avoid the accident.

3- /p/

3.a.-

pea	repay	speed	hip
pray	riper	spray	cap
plate	employ	spade	tap
poor	appear	sprain	rope
proud	replay	spit	stop
plant	deeper	spring	cup

3.b.-

- Put the pens and pencils by the parcel.
- Policemen were posted in prominent positions along the path.
- Tip the porter for posting the packets.
- People were slipping on the pavement where the apples had been dropped.

4-16 /

4.a.-

bee	**abroad**	**timber**	**orb**
bream	**obey**	**member**	**robe**
blink	**obliged**	**amber**	**job**
book	**cabman**	**sombre**	**rub**
brought	**cobnut**	**lumber**	**abb**
blouse	**table**	**number**	**globe**

4.b.-

- A brisk breeze was blowing when they went abroad.
- Bring the bat and ball to the beach.
- Be sure to bring the books back.
- Both brothers have bought umbrellas.

5.- /k/

5.a.-

key	thicker	scream	weakened	leak
cry	recall	score	darkened	peak
clean	exclaim	scrach	shaken	park
cup	reclaim	scare	quicken	talk
cross	decay	screw	beckon	ache
clock	locker	sky	reckon	soak

5.b.-

- He parked his car in the Cathedral Close.
- A half crown to cover the cost of the cleaning.
- Pick up the pack of cards and count them.
- When I collected the cup, a couple of them were cracked.

6/g/

6.a.-

guard	regard	eagle	pig
green	ignore	gargle	egg
gleam	bigger	gurgle	league
golf	example	giggle	dog
grass	forget	wriggle	plague
glare	examine	haggle	rug

6.b.-

- I'll get a gramophone with a longer guarantee.
- We've given the rugs and bags to the guards.
- You'll agree that these gloves were a good bargain.
- We're grateful for the guidance you've given us.

GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH CONSONANTAL SOUNDS.

INTRODUCTION.

As with plosive consonantal sounds, the rest of the consonants and semivowels have been in all cases studied and contrasted from the articulatory point of view. The description of each sound is given considering the closure (complete for affricates and nasals, partial for laterals, narrowing for fricatives and intermittent for frictionless continuants), the place of articulation (bilabial, labiodental, interdental, dental, alveolar, palatoalveolar, postalveolar, palatal, velar and glottal), the vibration of the vocal cords (voiceless / fortis) and the degree of breath and muscular energy involved in their production (fortis / lenis). Fricatives and affricates are contrasted in minimal pairs. River Plate Spanish consonantal sounds have been studied following the already given description for General British English consonantal sounds by the International Phonetics Association of Great Britain.

PROCEDURE

The same procedure used for plosive sounds has been applied. Two lists have been prepared. One of them with General British English consonantal sounds in three positions, initial, medial and final with all phonemically allowed clusters. On the other list River Plate Spanish consonantal sounds have been included also following the three positions and possible clusters. Both lists have been recorded by native speakers in a combined tape. The General British English examples have been read first, followed by the River Plate Spanish sounds with a 10 seconds interval. Between each sounds 25 seconds and between each position 20 seconds have been left. The sounds have been recorded in the order

voiceless / voiced when dealing with affricates and fricatives. The recording for General British English sounds have been made in the Department of Philology and Linguistics, University College, London, Great Britain. River Plate Spanish sounds have been recorded in the Language Laboratory of the School of Modern Languages, Universidad del Salvador. The combined tape has been processed at University College.

RESULTS

Different from General British English plosive consonantal sounds, that in general are difficult to be correctly produced by River Plate Spanish speakers, the rest of the consonantal groups are produced practically with no problems due to their similarities in both languages. Only those that do not exist in River Plate Spanish have a certain degree of difficulty. Exercises have been provided only for those sounds given as difficult.

GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH FRICATIVE SOUNDS

DISTRIBUTION AND CONSTRAST

General British English	River Plate Spanish
I) / ɸ / Nonexistent	*/ ɸ /* ***Bilabial Voiceless Fortis.*** **Initial Position:** *Nonexistent.* **Mid Position:** */ a ɸ ' p e r o / áspero.* */ o ɸ ' β a l d o / Osvaldo.* *Only used in R.P.S. as allophonic variant of the alveolar voiceless fortis fricative /s/ when preceding the bilabial voiceless fortis plosive /p/ and the bilabial voiced lenis fricative /β/.* **Final Position:** *Nonexistent.*

II) */ β / Nonexistent.*	*/ β /* ***Bilabial Voiced Lenis.*** **Initial Position:** *Nonexistent.* *The bilabial partially devoiced lenis plosive / b̥ / is used in this position.* **Mid Position:** */ ˈlaβo/ lavo.* *Except when preceded by the bilabial voiced lenis nasal / m/ where the bilabial partially devoiced lenis plosive / b̥ / is used.* */ ˈt̪ambo / tambo.* **Final Position:** *Nonexistent.*

III) */ f /* ***Labiodental Voiceless Fortis***	*/ f /* ***Labiodental Voiceless Fortis.***

Initial Position

a) / fʌn̥ / fun *b) / ˈfɔ:mɪŋ̊ / forming* *c) / freɪm̥/ frame* *d) / flɑ:ə / flower* *e) / fjuː / few* *f) / fw- / nonexistent*	*a) / fas / faz* *b) / ˈfosa / fosa* *c) / ˈfrase / frase* *d) / ˈfleko / fleco* *e) / ˈfjeht̪a / fiesta* *f) / ˈfwezo / fuego*

Mid Position

a) / lɑ:ft͡ʃ/ *laughed*	a) /ft͡ʃ / *nonexistent. Final consonantal clusters have Ø occurence in R. P. Spanish.*
b) / ˈkʰɒfɪŋ̍/ *coughing*	b) / kaˈfe / *café*
c) / rɪˈfreɪn̩ / *refraine*	c) / rreˈfrɑn̩/ *refrán*
d) / əˈflɪʒt͡ʃ/ *afflict*	d) / aflɪˈxɪrr̩/ *afligir*
e) / rɪˈfjuːz̩ / *refuse*	e) /aˈfjat̪o/ *afiato*
f) /fw / *nonexistent only in compounding:* / ˈlaɪfwɜːk̚ / *life work (also life's work).*	f) / aˈfwera / *afuera*

Final Position

a) / laɪf / *life*	a) *Nonexistent*
b) /ɪˈnʌf / *enough*	b) *Nonexistent*

IV) / v / ***Labiodental Voiced Lenis***	***/ v /*** ***Nonexistent. The bilabial voiced lenis plosive / b / and the bilabial voiced lenis fricative /β / are used instead.***

Initial Position

	The partially devoiced bilabial lenis plosive is used when spelled with letter "v".
a) / væn̥ / van	*a) / b̥a n̥ / van*
b) / 'vɪ ʔtʸɪm̥ / victim	*b) / 'b̥i k̟ t̟ i ma / víctima*
c) / vɤ - / nonexistent	*c) Nonexistent*
d) / vl - / nonexistent	*d) Nonexistent*
e) / vjuː / view	*e) / 'b̥ʝexo / viejo*
f) / vw- / nonexistent	*f) / 'b̥welo / vuelo*

Mid Position

a) / ˈlʌvd̥ / loved	a) The partially devoiced bilabial lenis fricative / β / is used when spelled with letter "v". Ø occurrence in monosyllables because final consonantal clusters do not exist in R. P. Spanish.
b) / ˈmuːvɪŋ̊ / moving	b) / moˈβɛɹ̥ɹ / mover
c) / vɹ- / nonexistent, only in compounding: / ˈlaɪvɹeɪl̥ / liverail	c) Nonexistent
d) / ˈlaɪvlɪ / lively	d) Nonexistent
e) / ɹɪ vjuː/ review	e) / aˈβjoŋ̊ / avión
f) /-vw- / nonexistent	f) / ɹɹɛ βwe lo / revuelo

Final Position

a) / lʌv̥ / love	a) Nonexistent
b) / ɪm̥ˈpɹ̥uːv̥ / improve	b) Nonexistent

v) / θ / ***Dental (Interdental) Voiceless Fortis.***	/ θ / ***Dental (Interdental) Voiceless Fortis.***

Initial Position

a) / θɔ: / thaw *b) / ˈθɹ:sIs / thesis* *c) / θrəʊ/ throw* *d) / θI- / nonexistent* *e) / θjuːz/ thews* *f) / θwɔːt / thwart*	*Nonexistent in River Plate Spanish.*

Mid Position

a) / mɪθs / myths	*a) Nonexistent in R. P. Spanish only as the allophonic variant of the alveolar voiceless fortis fricative /s/ when preceded by the dental voiced lenis fricative /ð/:* */ deθde / desde.*

b) /ˈɔːθə/ *author* c) /ɪnˈθrəʊn/ *enthrone* d) /ˈruːθləs/ *ruthless* e) /ɪnˈθjuːz/ *enthuse* d) /ˈnɔːθwest/ *northwest*	

Final Position

a) /saʊθ/ *south* b) /ˈplɪməθ/ *Plymouth*	*Nonexistent in River Plate Spanish.*

VI) /ð/ ***Dental (Interdental) Voiced Lenis.***	/ð/ ***Dental (Interdental) Voiced Lenis.***

Initial Position

a) / ðɪs / this b) / 'ðɪðə/ thither c) / ðr- / nonexistent d) / ðl- / nonexistent e) / ðj- / nonexistent f) / ðw- / nonexistent	a) Nonexistent. The dental partially devoiced lenis plosive / d̥ / is used: / d̥os / dos b) / 'd̥ama / dama c) / 'd̥rama/ drama d) / d̥ˠl / nonexistent e) / d̥jos / dios f) / 'd̥wejɲo / dueño

Mid Position

a) / bri:ðz / breathes b) / 'ləʊðɪŋ / loathing c) / 'wɪðrɪŋ / withering d) / 'bl̥laɪðlɪ / blithely e) /-ðj- / nonexistent f) /-ðw- / nonexistent	a) Nonexistent. Final consonantal cluster have ø occurrence in RPS. b) / 'laðo/ lado c) / la'ðro / ladró d) / -ðl- / nonexistent e) / a'ðjos / adiós f) / a'ðwejɲo / adueño

Final Position

a) /wɪð/ with b) /ˌəʊvəˈraɪð / overwrithe	a) Nonexistent. b) Nonexistent.

VII) / s / ***Alveolar Voiceless Fortis***	***/ s /*** ***Alveolar Voiceless Fortis***

Initial Position

a) / sʌn̥ / sun b) /ˈsɔːlɪ / sorely c) / sr- / nonexistent d) / slæŋ̊ / slang e) / sjuː / sue f) / swed̥ / suede g) / spʲeɪn̥/ Spain	a) / so!̥ / sol b) / ˈsako / saco c) / sr- / nonexistent d) / sl- / nonexistent e) / ˈsjelo / cielo f) / ˈswelo / suelo g) / sp- / nonexistent

h) /stʲeɪ/ *stay*	h) /sl̥- / *nonexistent*
i) /skʲaɪ/ *sky*	i) /sk- / *nonexistent*
j) /sfɪə/ *sphere*	j) /sf- / *nonexistent*
k) /svelt̥̚/ *svelte*	k) /sv- / *nonexistent*
l) /smaʊk̚/ *smoke*	l) /sm- / *nonexistent*
m) /sneɪk̚/ *snake*	m) /sn- / *nonexistent*
n) /spʲrɪ eɪ / *spray*	n) /spr- / *nonexistent*
o) /spˡlɪːn̥/ *spleen*	o) /spˡl- / *nonexistent*
p) /ˈspʲjuːtʲəm̥/ *sputum*	p) /spj- / *nonexistent*
q) /stʲrɪ eɪ / *stray*	q) /st̠r / *nonexistent*
r) /stʲjuː / *stew (also)* /stʃuː/ *undergoing a process of coalescent assimilation*	r) /st̠ʃ- / *nonexistent*
s) /skʲrɹːn̥/ *screen*	s) /skr- / *nonexistent*
t) /skˡlɪˈrəʊsɪs / *sclerosis*	t) /skˡl- / *nonexistent*
u) /skʲwɹːk̚/ *squeak*	u) /skw- / *nonexistent*

Mid Position

a) / maːsk / *mask*	a) *nonexistent in monosyllables.*
b) / ˈmæsɪz / *masses*	b) / ˈkasa / *casa*
c) / ˈaːskɪŋ / *asking*	c) *The velar voiceless fortis fricative* / x / *is used undergoing a process of regressive assimilation* / ˈaxko / *asco*
d) / lʌst / *lust*	d) *The glottal voiceless fortis fricative* / h / *is used undergoing a process of regressive assimilation.* / ˈahta / *hasta*
e) / ˈhɒspɪtl̩ / *hospital*	e) *The bilabial voiceless fortis fricative* / ɸ / *is used undergoing a process of regressive assimilation* / oɸpiˈtal / *hospital*
f) / ˈæʔməsfɪə / *atmosphere*	f) *The labiodental voiceless fortis fricative* / f / *is used undergoing a process of regressive assimilation* / aˈfmoffera / *atmósfera*
g) / dɪsˈdeɪn / *disdain*	g) *The dental (interdental) voiceless fortis fricative* / θ / *is used undergoing a process of regressive assimilation* / ˈdeθe / *desde*

h) Only in word boundary the palatal voiceles fortis fricative / ʃ / is used undergoing a process of regressive assimilation but due to gemination of two identical sounds, elision is applied so that only one of the two sounds is produced. */ ˈæn̥ʃuːz̥ / Anne's shoes.*	*h) Only in word boundary the palatal voiceles fortis fricative / ʃ / is used undergoing a process of regressive assimilation* */ laʃˈʒaβes / las llaves.*
i) ditto R. P. Spanish. */ ˈlaːˈsɒŋ̊ / last song* *NB: In this particular position the alveolar voiceless fortis plosive / t̚ / is elided following the rule of "three elements cluster".*	*i) Only in word boundary when the alveolar voiceles fortis fricative / s / is followed by another one, the process of elision is applied due to gemination of two identical sounds.* */ laˈsaβanas / las sábanas.*
j) / lɪst̚ / list	*j) The palatal voiceless fortis allophone fricative / ʂ / is used undergoing a process of regressive assimilation only when preceded by the palatal tense vowel / i / and followed by the dental voiceless fortis plosive / t̪ /* */ ˈliʂt̪o / listo*

k) Nonexistent	*k) Only in word boundary the allophonic devoiced variant / n̥ / is used when followed by the labiovelar voiced lenis fricative /ɰ/.* */ lo n̥'ɰekos/ los huecos.*
l) /'aɪs bʊ̯k͡s/ ice-box	*l) The bilabial voiceless fortis fricative / Φ / is also used when followed by the voiced homorganic fricative /β/.* */ oΦ'βalɟ̯o / Osvaldo.*
m) /d͡ɪs'mæn̥t͡ʃ/ dismantle	*m) The bilabial nasal devoiced allophonic variant /m̥/ is used undergoing a process of regressive assimilation affecting the vibration of the vocal cords when followed by the bilabial voiced lenis nasal /m/.* */ 'mim̥mo / mismo.*

n) / mɪs'nəʊmə/ misnomer	*n) The alveolar nasal devolced allophonic variant /n̥/ is used undergoing a process of regressive assimilation affecting the vibration of the vocal cords when followed by the alveolar voiced lenis nasal /n/.* */'ən̥no/ asno.*
o) Nonexistent	*o) Only in word boundary the palatal nasal devolced allophonic variant /ɲ̊/ is used undergoing a process of regressive assimilation affecting the vibration of the vocal cords when followed by the palatal voiced lenis nasal /ɲ/.* */ loɲ̊'ɲokis/ los ñoquis.*
p) / mɪs'li:d/ mislead	*p) The alveolar lateral devolced allophonic variant /l̥/ is used undergoing a process of regressive assimilation affecting the vibration of the vocal cords when followed by the alveolar voiced lenis lateral /l/.* */'il̥la / isla*

q) / mɪs'ʧɪvəs/ *mischievous*	q) *Only in word boundary a soft palatal voiceless fortis fricative* / ʃ / *is used undergoing a process of regressive assimilation when followed by the palatoalvelar voiceless fortis affricate* /ʧ/. / loʃ 'ʧikos/ *los chicos.*
r) *Only in word boundary* / 'les 'jo̝ / *less young*	r) *Only in word boundary the palatal devoiced fortis semivowel* /ʝ̥/ *is used undergoing a process of regressive assimilation when followed by the palatal voiced lenis semivowel* / j /. / loʝ̥'jelos / *los hielos.*
s) / ə'sjuːm̥/ *assume*	s) / a'sjeɲ̟̊to/ *asiento*
t) /'hausweif/ *housewife*	t) /a'sweṯo/ *asueto*

Final Position

a) / mæs / *mass* b) / 'bæ lɪn̥s / *balance*	a) / mas / *mas* b) / 'kapas / *capas*

VIII) / z / ***Alveolar Voiced Lenis***	***Nonexistent.***

Initial Position

a) / zu: / *zoo* b) / 'zeɪnɪ / *zany* c) / zjuːs / *Zeus* d) / 'zwiːbæk / *zwieback*	

Mid Position

a) / bʌzd / *buzzed* b) / pʰə'zes / *possess* c) / 'ɒzwəld / *Oswald*	

Final Position

a) / lɯːz̥/ *lose* b) / əˈpʰl̥aɪz̥/ *applies*	

IX) / ʃ / ***Palatal Voiceless Fortis***	/ ʃ / ***Palatal Voiceless Fortis***

Initial Position

a) / ʃaʊt̚/ *shout* b) /ˈʃaɪnɪŋ / *shinning* c) / ʃrɪŋk̚/ *shrink* d) /ʃlepʲ̚/ *schlep* e) /ʃmɯːz̥ / *schmooze* f) /ʃnɯːk̚ / *schnook* g) /ʃwaː/ *schwa*	a) / ja / *ya* b) /ˈjaβes/ *llaves* c) *nonexistent* d) *nonexistent* e) *nonexistent* f) *nonexistent* d) /ˈʃweβe / *llueve*

Mid Position

a) /pʰʊʃtˀ/ pushed	a) Nonexistent in monosyllables because final consonantal clusters are not used in R.P.Spanish.
b) /ˈæʃɪz̥/ ashes	b) /ˈkaʃe / calle
c) / ɪn̥ˈʃraɪn̥ / enshrine	c) nonexistent
d) /ˈæʃlɪ / Ashley	d) nonexistent
e) /ˈæʃ we n z d͡ɪ / Ash Wednesday	e) nonexistent
f) /ˈd͡ɪʃfəŧ̚/ dishful	f) nonexistent
g) / ˈkʷr̥ʌʃ bɹɪɹə / crushbarrier	g) nonexistent
h) / ˈpʰʊʃ ʧɛə / pushchair	h) nonexistent
i) / ˈpʰʊʃ kaːtˀ/ pushcart	i) nonexistent
j) / ˈpʰʊʃ b̥ʌt̚n̥̩/ pushbutton	j) nonexistent
k) / ˈæʃ tʷreɪ/ ashtray	k) nonexistent

Final Position

a) / m æʃ / mash	a) /b̥eɪ̆ʃ/ beige
b) / ˈb̥ɹɪtʷɪʃ / British	b) /ʒ̊aˈɹaʃ / garaje

xj /ʒ/ **Palatal Voiced Lenis**	/ʒ/ **Palatal Voiced Lenis**

Initial Position

a) Nonexistent b) /ˈʒɪgalɔʊ / gigolo c) Nonexistent	a) /ʒo / yo b) /ˈʒuβʒa / lluvia c) /ˈʒweβe / llueve

Mid Position

a) /beɪʒd̚ / beiged b) /ˈpl̥eʒa / pleasure c) Nonexistent	a) nonexistent in monosyllables because final consonantal clusters are not used in R.P.Spanish. b) /ˈkuʒo / cuyo c) /rraˈʒwela/ rayuela

Final Position

a) /beɪʒ / beige b) /gəˈraːʒ / garage	a) /beiʒ / beige b) /gaˈraʒ / garaje

XI) Nonexistent	*/ x /* ***Velar Voiceless Fortis***

Initial Position

	a) /xe̞ / gel *b) / xa'laɾ̞ɾ / jalar* *c) /xwan̪ /Juan*

Mid Position

	a) /a'x i / ajI *b) / a'xwaɾ̞ɾ / ajuar* *c) /'a x h o / asco* *allophonic variant of the alveolar voiceless fortis fricative / s /.*

Final Position

	a) / b o x / boj b) / r r e l o x / reloj

XII) Nonexistent	/ ʒ / ***Velar Voiced Lenis***

Initial Position

	Nonexistent. The velar voiced lenis plosive / g / is used.

Mid Position

	a) / ˈaɣa / haga *b) / ˈaɣɾjo / agrio* *c) / aɣluˈt̪ino/ aglutino* *d) / ˈaɣ-wa / agua* *NB: Except when preceded by the velar voiced lenis nasal / ŋ / where the velar voiced lenis plosive / g / is used.* */ ˈt̪eŋgo / tengo*

Final Position

	Nonexistent

XIII) / h / ***Glottal Voiceless fortis***	***/ h /*** ***Glottal Voiceless Fortis*** ***(allophonic variant)***

Initial Position

a) / haʊs / *house*	a) *nonexistent.*
b) / ˈhɒlɪ / *holy*	b) *nonexistent.*
c) / hjuː / *hue*	c) *nonexistent.*
d) / hweə / *where (old use)*	d) *nonexistent.*

Mid Position

a) / əˈhed̪ / *ahead*	a) *Only as an allophonic variant of the alveolar voiceless fortis fricative / s / when followed by the dental voiceless fortis plosive / t̪ /.* / ˈpɑhta / *pasta*
b) / ɪnˈhjuːmən / *inhuman*	b) *nonexistent.*

Final Position

Nonexistent.	***Nonexistent***

XIV) Nonexistent	/ ʂ / ***Palatal voiceless Fortis***

	Only used as the allophonic variant of the alveolar voiceless fortis fricative /s / when followed by the dental voiceless fortis plosive / t̪ / and preceded by the palatal tense vowel / i / */ ˈbi ʂ t̪o / visto.*

XV) Nonexistent	/ ɱ / ***Labiovelar Voiced Lenis***

	Only used as an allophonic variant of the labiovelar voiced lenis semivowel /w/ in initial position */'mekos / huecos.*

GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH NASAL SOUNDS

DISTRIBUTION AND CONTRAST

I) /m/ ***Bilabial Voiced Lenis***	*/m/* ***Bilabial Voiced Lenis***

Initial Position

a) /mɔ: / more *b) /'mʌðə / mother* *c) /'mjuːzɪk̃ / music* *d) Nonexistent.*	*a) /mas / más* *b) /'maðre / madre* *c) /'mjeðo/ miedo* *d) /'mwero / muero*

Mid Position

a) /'sʌmd̥/ summed *b) /ə'mʌŋ̊/ among* *c) /ə'mjuːz̥/ amuse* *d) Nonexistent. Labiovelarized when followed by the labiovelar voiced lenis semivowel.* */'sʌmwʌn̥ / someone*	*a) Nonexistent. Ø occurrence of final consonatal clusters in R. P. Spanish.* *b) /'amo/ amo* *c) / ka'mjon̥ / camión* *d) / al'mwerso/ almuerzo*

Final Position

a) / kʰʌm/ come b) /ɪmˈfɔːm / inform	a) *Nonexistent.* b) *Nonexistent.*

II) / ∩ / ***Alveolar Voiced Lenis***	/ ∩ / ***Alveolar Voiced Lenis***

Initial Position

a) / ∩əʊ/ no b) /ˈ∩ʌθɪŋ / nothing c) / ∩juː/ new *Also applying coalescent assimilation* / ɲuː/ d) *Nonexistent.*	a) / ∩o/ no b) /ˈ∩aδa / nada c) /ˈ∩jeβa / nieve d) / ∩wes/ nuez

Mid Position

a) / faɪnd̥ / *find*	a) *Nonexistent. ø occurrence of final consonatal clusters in R. P. Spanish.*
b) / ˈmʌnɪ / *money*	b) / ˈmonо / *mono*
c) / rɪˈnjuː / *renew*	c) / bi̥ˈnjeto̞ / *bisnieto*
Also applying coalescent assimilation / rɪˈɲuː /	
d) *Nonexistent*	d) / aˈnwal̥ / *anual*

Final Position

a) / sʌn̥ / son	a) / son̥ / son
b) / ˈbʌt̃n̥ / *button*	b) / t̥aˈpon̥ / *tapón*

III) / ɲ /	/ ɲ /
Palatal Voiced Lenis	***Palatal Voiced Lenis***
(allophonic variant)	

Initial Position

a) /ɲu:/ new b) /ˈɲu:zri:t̚/ newsreel	a) /ɲu / ñu b) /ˈɲat̪o / ñato

Mid Position

a) Nonexistent in monosyllables. b) / ˈæɲvət̚ / annual	a) Nonexistent. Ø occurrence of final consonatal clusters in R. P. Spanish. b) / ˈkaɲo / caño

Final Position

a) Nonexistent.	a) Nonexistent.

M) / ŋ / Velar Voiced Lenis	/ ŋ / Velar Voiced Lenis (allophonic variant)

Initial Position

a) Nonexistent.	***a) Nonexistent.***

Mid Position

a) Nonexistent in monosyllables. *b)* / ˈlɒŋʃɪp / *longship* / tʰæŋkʰ / *tank* / ˈɪŋgɪlɪʃ / *English*	*a) Nonexistent. Ø occurrence of final consonatal clusters in R. P. Spanish.* *b) Allophonic variant of the alveolar voiced lenis nasal / n / before the velar voiceless fortis plosive / k / and the velar voiced lenis plosive / g /.* / ˈtaŋke / *tanque* / ˈteŋgo / *tengo*

Final Position

a) / sɒŋ / *song* *b)* / ˈlɜːnɪŋ / *learning*	*a) Nonexistent.* *b) Nonexistent.*

ʍ /ɱ/ ***Labiovelar Voiced Lenis*** ***(allophonic variant)***	/ɱ/ ***Labiovelar Voiced Lenis*** ***(allophonic variant)***

Initial Position

a) Nonexistent.	***a) Nonexistent.***

Mid Position

a) Nonexistent in monosyllables. *b) Allophonic variant of the bilabial voiced lenis nasal /m/ when preceding the labiovelar voiced lenis semivowel /w/* */ ˈsʌɱwʌn̥ / someone* *and the labiodental voiceless fortis fricative /f/* */ ˈkʌɱfəɾˈ / comfort*	*a) Nonexistent. Ø occurrence of final consonantal clusters in R. P. Spanish.* *b) Nonexistent.*

c) Allophonic variant of the alveolar voiced lenis nasal / n / when preceding the labiovelar voiced lenis semivowel / w / (in word boundary). / 'tʰe m̥'wɪs kˠɪz̥/ ten whiskies and the labiodental voiceless fortis fricative / f / / 'æ m̥ fi:t d̥̃/ Anfield.	c) Allophonic variant of the alveolar voiced lenis nasal / n / when preceding the labiodental voiceless fortis fricative / f /. / a m̥'fiβjo / anfibio.
d) Allophonic variant of the velar voiced lenis nasal / ŋ / when preceding the labiovelar voiced lenis semivowel / w / (in word boundary). / 'sɪŋ̊wʌn̥/ sing one and the labiodental voiceless fortis fricative / f / (in word boundary) / 'raɪ tˠɪŋ̊'fɔ:/ writing four.	d) Nonexistent. The velar voiced lenis nasal / ŋ / is also an allophonic variant.

Final Position

a) Nonexistent.	**a) Nonexistent.**

GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH AFFRICATE SOUNDS

DISTRIBUTION AND CONTRAST

I) /ʧ/ ***Palatoalveolar Voiceless Fortis.***	/ʧ/ ***Palatovelar Voiceless Fortis.***

Initial Position

a) /ʧɪn̥/ *chin* b) /ˈʧɑːmɪn̥/ *charming*	a) /ʧaŭ/ *chau* b) /ˈʧiko/ *chico*

Mid Position

a) /ˈpʰæʔʧt̬/ *patched* b) /ˈmæʧɪz̥/ *matches*	a) *Nonexistent. Ø occurrence of final consonatal clusters in R. P. Spanish.* b) /ˈmaʧo/ *macho*

Final Position

a) /pʰɪʔʧ/ *pitch* b) /ɪnˈrɪʧ/ *enrich*	a) *Nonexistent.* b) *Nonexistent.*

II) /dʒ/ ***Palatoalveolar Voiced Lenis***	/dʒ/ ***Palatoalveolar Voiced Lenis*** ***Allophonic variant of the palatal voiceless fortis fricative /ʃ/ and the palatal voiced lenis fricative /ʒ/ indistinctly.*** ***Only in initial position.***

Initial Position

a) /dʒɔ:/ *jaw* b) /'dʒɪmɪ/ *Jimmy* c) *Nonexistent.*	a) /'dʒo/ *yo* b) /'dʒanto̪/ *llanto* c) /'dʒweβe/ *llueve*

Mid Position

a) /ɜ:dʒd̚/ *urged* b) /ə'dʒʌst̚/ *adjust*	a) *Nonexistent. Ø occurrence of final consonatal clusters in R. P. Spanish.* b) *Nonexistent.*

Final Position

a) / e dʒ / edge b) / ɪ n d ʌ n t dʒ / indulge	a) *Nonexistent.* b) *Nonexistent.*

GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH INTERMITTENT SOUNDS

DISTRIBUTION AND CONTRAST

I) / ɾ / ***Alveolar Voiced Lenis Flap (retracted)***	*/ ɾ /* ***Alveolar Voiced Lenis Flap***

Initial Position

a) / ɾaɪs / rice *b) /ˈɾʌnə / runner* *c) / ɾɪə / rear* *also / ɾjə /*	*a) Nonexistent.* *b) Nonexistent.* *c) Nonexistent.*

Mid Position

a) Nonexistent in monosyllables *b) / əˈɾəʊz̥ / arose*	*a) Nonexistent. Ø occurrence of final consonatal clusters in R. P. Spsnish.* *b) /ˈaɾo/ aro*

Final Position

a) Nonexistent.	*a) Nonexistent.*

II) Nonexistent	*/ ɾ ɾ /* *Alveolar Voiced Lenis Rolled*

Initial Position

	a) / ɾɾ e ʝ / rey *b) / 'ɾɾ i m a / rima* *c) / 'ɾɾ ʝ e n d̯ a / rienda* *d) / 'ɾɾ w e β a / rueda*

Mid Position

	a) Nonexistent. Ø occurrence of final consonatal clusters in R. P. Spanish. *b) / a 'ɾɾ i β a / arriba* *c) / a'ɾɾ ʝ e n d̯ o / arriendo* *d) / k a'ɾɾ w a x e / carruaje*

Final Position

	a) /ˈdaɾ/ dar b) / aˈmaɾ / amar

GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH LATERAL SOUNDS

DISTRIBUTION AND CONTRAST

I) / l /	/ l /
Alveolar Voiced Lenis "clear"	***Alveolar Voiced Lenis***

Initial Position

a) / laɪ / *lie*	a) / lus / *luz*
b) / 'lʌkɪ / *lucky*	b) / 'loka / *loca*
c) / lʒʊə / *lure*	c) / 'ljenso / *lienzo*
d) *Nonexistent.*	d) / 'lwegʊ / *luego*

Mid Position

a) *Nonexistent in monosyllables*	a) *Nonexistent. Ø occurrence of final consonatal clusters in R. P. Spanish.*
b) / ɾɪ'laɪ / *rely*	b) / 'kala / *cala*
c) *The allophonic variant "dark" is used followed by a consonatal sound or a semivowel*	c) *Nonexistent allophonic variant in R. P. Spanish.*
/ 'ɔ:ɫwɛɪz / *always*	/ 'ahta'lweʒo / *hasta luego*
/ 'ɔ:ɫtʲə / *alter*	/ al'taɾɾ / *altar*

Final Position

a) Nonexistent. *The allophonic variant "dark"is used.*	*a)* /kal̰/ *cal.* *b)* /a'sul̰/ *azul.*

II) / ɬ / ***Alveolar Voiced Lenis "dark"*** ***(allophonic variant)***	***Nonexistent.***

Initial Position

a) Nonexistent.	***a) Nonexistent.***

Mid Position

Only when preceding consonants or semivowels. /maʊɬd̰/ *mold* /'kʰaʊɬ'wɔ:/ *cold war* /'ɔ:ɬ'jɜ:z̰/ *all years*	***Nonexistent.***

Final Position

a) / sɔʊ̥t̪ / *soul.* b) / ɾɪˈtʰɛt̪̥ / *retell.*	

ll) / l̥ / ***Alveolar Devoiced Fortis*** ***(allophonic variant)***	/ l̥ / ***Alveolar Devoiced Fortis*** ***(allophonic variant)***

In both languages only used when preceded by any of the voiceless fortis plosives. Only in mid position and stressed.

a) / pˡl̥ɛɪt̪̥ / *plate.* b) / əˈtˡl̥æn̥t̪̥ɪk / *Atlantic.* c) / kˡl̥ɪə / *clear.*	a) / ˈpˡl̥at̪̥o / *plato.* b) / aˈt̪̥ˡl̥an̥t̪̥iko / *Atlántico.* c) / ˈkˡl̥aɾo / *claro.*

GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH SEMIVOWELS

DISTRIBUTION AND CONTRAST

1) / j / ***Palatal Voiced Lenis***	/ j / ***Palatal Voiced Lenis***

Initial Position

a) / jes / yes b) / 'jestʸadɪ / yesterday	a) / je! / hiel b) / 'jelo / hielo

Mid Position

a) / tʸju:b̥ / tube also / ʧu:b̥ / b) / ə'bʷju:z̥ / abuse	a) / sjeⁿ / cien b) / kaⁿ'sjoⁿ / canción

Final Position

a) Nonexistent.	***a) Nonexistent.***

ll) ***/ w /*** ***Labiovelar Voiced Lenis***	***/ w /*** ***Labiovelar Voiced Lenis***

Initial Position

a) / waɪ / why *b) / 'wɪn̥i^{Y}ə / Winter*	*The allophonic labiovelar voiced lenis fricative variant / ʍ / is used / 'ʍeso / hueso.*

Mid Position

a) Nonexistent monosyllables only in old fashioned renderings */ hwen̥ / when* *b) / ə'weɪ / away*	*a) Nonexistent monosyllables.* *b) / 'swaβe / suave*

Final Position

a) Nonexistent.	***a) Nonexistent.***

HIERARCHY OF DIFFICULTIES FOR A RIVER PLATE SPANISH SPEAKER IN THE PRODUCTION OF GENERAL BRITISH ENGLISH FRICATIVE CONSONANTAL SOUNDS

1.- / ʋ / Labiodental voiced lenis.

Nonexistent in River Plate Spanish. The bilabial voiced lenis plosive / b / in initial position and the bilabial voiced lenis fricative / β / in mid position are used.

2.- / z / Alveolar voiced lenis.

Nonexistent in River Plate Spanish. The alveolar voiceless fortis fricative / s / is used in all positions.

3.- / h / Glottal voiceless fortis.

Though existent in River Plate Spanish as an allophonic variant of the alveolar voiceless fortis fricative / s / when preceding the dental voiceless fortis plosive / t̪ /, it is most of the time velarized and replaced by the River Plate Spanish soft velar voiceless fortis fricative / x /.

4.- / ð / Dental voiced lenis.

Though existent in River Plate Spanish it tends to be replaced by the River Plate Spanish dental voiced lenis plosive / d̪ / in initial position.

5.- /ʒ/ Palatal voiced lenis.

Though existent in River Plate Spanish it tends to be replaced by the homorganic voiceless fortis fricative /ʃ/ in all positions.

NB:

The rest of the General British English fricative consonantal sounds have exactly the same positions in River Plate Spanish.

EXERCISES FOR THE APPLICATION AND PRACTICE OF GENERAL BRITISH ENGLISH CONSONANTAL SOUNDS INCLUDED IN THE HIERARCHY OF DIFFICULTIES.

1.- / v / sound.

van	**avoid**	**poverty**
love	**velvet**	**vegetable**
vest	**invite**	**reviewer**
cave	**venture**	**verandah**
veil	**canvas**	**invention**
prove	**variant**	**vanity**

- The vamp only lives on a variety of vegetables.
- There's a vase in the verandah on a violet velvet.
- A van with videos arrived at a village near Vienna.
- Victor and Valery love cards for Valentine's Day.

2.- / z / sound.

zoo	**present**	**zodiac**
drizzle	**zero**	**diseases**
zip	**possess**	**zoologist**
cause	**zenith**	**executive**
zeal	**arise**	**physical**
lose	**zebra**	**zucchini**

- Soldiers resist hazardous diseases when drizzling.
- The zoologist possesses many zebras in the zoo.
- Boys and girls are excited to exhibit their jerseys.
- Jazz fans in rose zoot suits saw a zeppelin near Zurich.

3.- / h / sound.

house	**ahead**	**dehydrate**
half	**hidden**	**hibernate**
hair	**inhale**	**rehearsal**
hack	**helpful**	**horizontal**
hard	**cohabit**	**inhuman**
high	**holder**	**hereditary**

- He heartly hates his holiday at home.
- He has half of his hair holding in his hand.
- The inhuman horseman is hidden in the house ahead.
- The inhabitants of the higlands and high hills have hundreds of hives.

4.- / ð / sound.

loathe	**thither**	**thereafter**
though	**neither**	**fatherhood**
clothes	**there - in**	**there - upon**
thee	**mother**	**gathering**
with	**hither**	**there - under**
those	**there - on**	**blithering**

- Mother loathes gathering for blithering.
- There is thou Father in those clothes.
- Thereafter there are many breathers.
- Those mothers are always blithering hither and thither.

5.- / ʒ / sound.

pleasure	**division**
measure	**gigolo**
treasure	**derision**
leisure	**confusion**
garage	**inclusion**
closure	**television**

- It's a pleasure to find the occasion to watch television.
- Its occasional inclusion derived in shouts of derision.
- The gigolo left the garage leisurely in a beige car.
- To avoid confusion measure the division of the treasure.

GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH

VOWEL SOUNDS.

VOWELS

INTRODUCTION

It is very difficult after so many years of teaching a subject according to certain parameters to change them abruptly. My intention in this paper is to show my colleagues the reasons why we need a renewal in our point of view. I know that sometimes a radical change is hard work but after having explained the reasons of the inadequacy of the parameters we are using, teachers will, at least, start to consider the possibility of including the new trends in the study of sounds and, in particular, of vowel sounds. While the acoustic and physiologic trends may be questioned, most phoneticians and linguists agree that the traditional articulatory descriptions are inadequate. Ladefoged, 1971, p.69, referring to standard vowel classification stated: "it is difficult to understand how phoneticians could persist in considering that the traditional articulatory categories provide an adequate specification of vowels." The new parameters have been tested many times so that the change has got a solid scientific basis.

HISTORICAL BACKGROUND - WHY NOT THE TONGUE ARCHING MODEL?

The vowel sounds have largely been studied on a model that establishes for each vowel a unique tongue position in terms of height and fronting of the tongue arch, this study can be dated back at least to the second half of the 19th century. It was initiated by Bell (1867) and immediately adopted before it could be subjected to experimental verification. This shows from the very onset the lack of scientific basis. The model has never been solidly

validated but is has been solidly contradicted. Many theories have been set in order to discredit Bell's model.

Although the articulatory hypothesis was refutable there were no means of testing its deficiencies during the 19th century. Grandgent (1890) had proposed the use of a method of fitting different sized discs into various parts of the vocal tract to measure its cross-section. He was the first to observe how the back of the tongue falls sharply in palatal vowels, leaving a large pharyngeal cavity. But the numerous repetitions of a vowel articulation necessary for Grandgent's method meant that these measurements were very coarse and had differences of tongue arch position smaller than a milimetre or so and they failed to show the anomalous tongue heights later reported from X-ray researches. Atkinson (1898) had used a similar proving method. During the 19th century, the criticism of the tongue-arching model was concerned with the definition of features specifications of particular vowels or with the design of the model. Some writers insisted that since speech consisted of sounds it should be described in acoustic or auditory terms. Meyers' (1910) plastopalatograms showed tongue heights not considered before. In the year 1928 Russel's massive X-ray study failed to corroborate the predicted tongue arch position. In the 1940s it was attacked from a new point of view. Joos (1948) insisted that those phoneticians who believed they could feel tongue positions by kinesthetic sense "were victims of self-deception." He based his statement with spectral evidence. Several years of advances in acoustical analysis and psycho-acoustical experimentation followed the above mentioned studies. The new trends established purely auditory or integrated acoustical-auditory systems for describing vowels (Jacobson *et al.*, 1952; Ladefoged *et al.*, 1972; Lieberman, 1976). Vowel description from the points of view of articulation was largely disavowed. Certain proofs were seen to point out the inconsistencies of articulation such as the confusing picture of vowel articulation

obtained from X-ray studies and the theoretical possibility of producing the same sound in a variety of ways. Wood (1977, p. 102) suggested that the alleged inconsistencies are due to observation of the wrong articulatory variables (height and fronting) rather than to articulatory irregularity. There are important and relevant regularities in the vowel articulation (Wood, 1975), ". . . the number of locations where the vocal tract is constricted by the tongue."

Before the 19th century, the articulatory model was the one used since ancient India that divided vowels into [ɪ - ɛ] - like palatals, [ɯ - o] - like labiovelars and [ɑ - a] - like pharyngeals. It also includes jaw opening and lip position. Due to the lack of an adequate acoustic theory, their spectral consequences could not be understood, and the impossibility of making quantitative investigations of internal articulation made it difficult to account for finer distinctions of vowel qualities.

The tongue arching model is considered far more capable of describing vowels in a more scientific way than the ancient model. Phoneticians claimed that the tongue was said to occupy any position along the front/back axis. The intermediate position between front and back was explicit.

The study of vowel articulation through the tongue-arching model was based on two dimensions, the vertical and horizontal movement of the top of the tongue hump and vowels were located in a cartesian coordinate system. Each vowel had its own tongue position coordinates in the high/low and front/back dimensions, and a complete vowel system forms a polygon characteristic for that language. All the other articulatory variables were said to be correlated with tongue arch coordinates.

They even tried to relate the tongue arch positions to the vowel spectrum. The top of the tongue arch was said to be the limit of a buccal cavity in which a characteristic vowel resonance was formed, and that arch was a neck between a buccal cavity and a pharyngeal cavity. At present, with the acoustic studies of the vocal tract and the source-filter theory (Chiba and Kajiyama, 1941; Stevens and House, 1951, 1955, 1961; Fant, 1960) the role attributed to the tongue arch proved to be a misconception.

Fant (1960) demonstrated that the location of the top of the tongue arch below the palate is the true place of narrowing the vocal tract. The narrowing can occur at any point along the vocal tract but in practice it only occurs at one of the four locations: along the hard palate, along the soft palate, in the lower pharynx, and in the upper pharynx.

Fant (1970) mentions three common misconceptions in the current theory of speech production. One of them is concerned with the role of the pharynx; the classical articulatory theories (Fletcher, 1929; D. Jones, 1934) which consider a fixed pharyngeal cavity supporting a number of different profiles of the upper part of the tongue. This conception is linked with a second misconception that states that the highest point of the tongue should coincide with a region of minimun cross - sectional area in the vocal tract separating a front cavity from a back cavity. X-ray data showed that there are variations in the large pharyngeal cavity and that there is a pharyngeal region of maximun narrowing in the so called back vowels (Russel, 1928; Heffner, 1949; Donn, 1950; Malmberg, 1952). The third misconception is related to the oversimplification of the acoustic function of a compound resonator system. The relation of F1 back-cavity to F2 front-cavity is supported by the correlations between the increasingly smaller mouth cavity and wider pharynx cavity within the series [ɑ], [æ], [e], [i]

and the associated decrease of F1 and increase of F2. Dunns' (1950) study on the origin of vowel formants proved that this theory was incomplete and partially erroneous.

We can consider the location of a major internal narrowing as one of the fundamental parameters of vocal tract configuration for vowels (Stevens and House, 1955; Fant, 1960). The length of the vocal tract was treated as a continuum of constriction location for model explorations of vocal tract resonances (Lindblom and Sundberg, 1971).

Stevens (1972) found vowel spectra to be relatively insensitive to moderate displacements of constriction location exactly on the three areas described in the ancient articulatory model. Fant's (1960) nomograms show four locations with this property: in the soft palate and in the upper pharynx for rounded vowels, and in the lower pharynx for spread lip vowels. Wood (1971) gave the same four locations from the formant transition frequencies of West Groenlandic Eskimo:

a) along the hard palate for the [i - e] - like allophones of [i] and [ɛ] - like allophones of [e];

b) along the soft palate for the [ʊ] - like allophone of [u];

c) in the upper pharynx for the [ʊ - ɔ] - like allophones of [o], and

d) the lower pharynx for the [ɑ-ä-æ] - like allophones of [a].

These results are important for the study of speech physiology. It is not acoustically relevant to utilize more than four constriction locations for vowels so the tongue must have a simpler task than has up to now been assumed. Summing up, there are four different places where the vocal tract is narrowly constricted by the tongue: along the hard palate, along the soft palate, in the upper pharynx, and in the lower pharynx. This statement is based on the information given by the acoustic study of vowels and the study of the muscular action.

As regards the acoustic study, it was proved that the formant frequencies are insensitive to some variation of the constriction location (Stevens, 1972); this variation might arise from the coarticulatory constraints of normal connected speech. The changes in the constriction locations do not affect the vocal spectra.

To understand the muscular action it is necessary to revise the muscles of the tongue in order to understand the role of each muscle in the four constriction locations.

MUSCLES OF THE TONGUE

The tongue muscles have been divided into two groups: extrinsic and intrinsic muscles:

Extrinsic muscles:

1- *Genioglossus:* This is the largest of the tongue muscles and constitutes the main bulk of the posterior portion of the tongue near the epiglottis. It originates at the point of the jaw *(sumphysis menti)* and fans out into the whole anterior-posterior extent of the tongue. In inserts largely in the intrinsic musculature of the tongue but sometimes reaches as far as the superficial dorsal tissue. It inserts close in the middle of the tongue (the *median septum*) anteriorly, and its insertions also spread laterally in the intermediate and posterior areas. It is capable of acting to move the tongue towards the point of the jaw.

2- *Hyoglossus:* This muscle originates at the hyoid bone and runs upwards and anteriorly towards the tongue tip, with some fibres reaching the tip region. It inserts largely in the intrinsic muscles, somewhat laterally to the midline of the tongue. Its action is to pull the tongue towards the hyoid bone (backwards) If the hyoid bone itself anchored in position by other muscles.

3- *Styloglossus:* This muscle originates at the styloid process near the ear, and enters the tongue at its lateral border at about the level of the ramus of the jaw bone. A large part of it then runs ventrally towards the midline of the tongue and anteriorly towards the tongue tip. the most anterior fibres interlacing with other muscles at the tip. A smaller part, turns slightly posteriorly in the tongue and attaches to hyoglossal musculature. The role of this muscle acting alone is to pull the tongue backwards and upwards. It could cooperate with the hyoglossus to pull the tongue backwards only.

4- *Palatoglossus:* This is a small muscle running from the lateral edge of the soft palate into the lateral border of the tongue, though because of its small size , its influence in speech may be relatively slight (see Figure 1).

Intrinsic muscles:

1- Superior longitudinal: This muscle runs the lenght of the tongue, lying in general, closer to the dorsal surface than any other muscle; it is largest in bulk medially and in the middle two fourths of the tongue, where it is triangular in cross-section. It narrows to a thin sheet at the most anterior and posterior extremities of the tongue.

2- Inferior longitudinal: This is a small muscle, oval in cross-section, which also runs the length of the tongue. It is situated well bellow the dorsal surface of the tongue and is largely medial to the hyoglossus. With the superior longitudinal muscle, it acts to contract the tongue in the longitudinal dimension.

3- Vertical: This muscle forms a good part of the thickness of the middle third of the tongue. It originates at the median septum, ventral to the superior longitudinal muscle, and runs towards the lateral border of the tongue fanning dorsally and ventrally. The muscle extends more anteriorly and posteriorly than the vertical muscle. Its role is to narrow the body of the tongue (see Figure 2).

CONSTRICTION LOCATIONS

The tongue narrows the vocal tract at one of four locations for vowels:

a) along the hard palate for [i - ɛ] - like vowels;

b) along the soft palate for [ɯ - ʊ] - like vowels;

c) in the upper pharynx for [o - ɔ] - like vowels, and

d) in the lower pharynx for [ɑ - a - æ] - like vowels.

These locations are where resonance modes are insensitive to some displacement of the constriction. The four constrictions are studied considering the anatomical descriptions supplemented by reported EMG results. The tongue body is positioned for vowels by its extrinsic muscles; the statement can be dated back to Hellwag (1781). He listed the genioglossus for palatals, the styloglossus for velars and the hyoglossus for pharyngeals. The vocal tract is shaped by the palatoglossus (linking the tongue in the velum), the superior pharyngeal constrictors (including the glossopharyngeal fibres) and the middle pharyngeal constrictors. The intrinsic muscles, especially the inferior longitudinals, also act in the tongue blade depression. According to the constriction of the tongue the vowels are classified into: palatal; velar; velopharyngeal and low pharyngeal vowels.

Palatal / i - ɛ / - like vowels.

The palatal tongue position depends on the constriction of the genioglossus, especially the posterior fibres. This was confirmed by EMG results (Harris, 1971; Smith, 1971; Raphael and Bell-Berti, 1975; Hiyawaki et al., 1975). The tongue root is pulled forwards and there is widening of the lower pharynx. At the same time the tongue body is pushed upwards towards the hard palate where it narrows the palatal passage. The mylohyoid muscles also elevate the tongue but this is not widely accepted for vowels. The intrinsic lingual muscles act as an additional help for the shaping of the tongue.

Velar / u - ʊ / - like vowels and velopharyngeal / o - ɔ / - like vowels.

These vowels form separate classes according to constriction location but they are generally treated together in order to give a clearer view of each class through comparision. The tongue is lower and more retracted from the mandible for / ʊ / than for / u /. The styloglossus draw the tongue upwards and backwards towards the uvula. EMG investigations by Harris (1971), Smith (1971) Raphael and Bell-Berti (1975) have found the styloglossus active for / u / - like vowels but the data is limited for / o / - like vowels. Smith demonstrated that the styloglossus is active in cardinal / o / and very little in cardinal / ɔ /. The styloglossus can then determine the upward and backward direction of the lingual movement.

The tongue is elevated towards the soft palate for / u / and retracted into the pharynx for / o /. The elevation is produced by the genioglossus pushing from below and the

palatoglossus pulling from above. And the retraction by the superior pharyngeal constrictors. The hyoglossus also draws the tongue down into the lower pharynx.

It has also been found by the above mentioned researchers that the posterior genioglossal fibres are active for / ɯ / and less active for / ʊ / because the body of the tongue is not elevated towards the velum and the root of the tongue is less advanced. There is also a difference of genioglossus activity between / o / and / ɔ /. (Hiyawaki et al., 1975).

The palatoglossus is relevant for the articulation of / ɯ / -like vowels by guiding the velar movement towards the soft palate and by controlling the degree of constriction. The velum tends to be more tightly closed against the posterior pharyngeal wall during / ɯ / -like vowels due to the particular sensitivity of its oral resonances to nasal excitation and because contractive nasality is rare for / ɯ / -like vowels. So we can state that there is palatoglossal involvement in the articulation of / ɯ / with simultaneous constriction of the palatine elevators. The retraction of the tongue into the pharynx for / o /, / ɔ / is due to the superior pharyngeal constrictors (including the glossopharyngeal fibres) (Smith, 1971). MacNeilage and Sholes (1964) found hyoglossus activity involved for / o /.

The tongue is drawn upwards and forwards by the styloglossus for / ɯ / - like classes and there is deflection towards the soft palate by the palatoglossus and the posterior genioglossus for / o / - like vowels, than for / ɯ / - like vowels (Wood, 1977).

Low pahryngeal /ɑ - a - æ / - like vowels.

There is considerable narrowing of the lower pharynx. The maximun constriction is in the vicinity of the epiglottis. The hyoglossus is the extrinsic tongue muscle (that draws the tongue down into the lower pharynx). An ultrasonic scan (Minifie et al., 1970) showed considerable inward displacement of the lateral pharyngeal walls (3-4 mm by the left wall) during the production of the pharyngeal vowels with constrictor activity. The EMG data are not satisfactory for this class of vowels. But through X-ray and ultrasound results we can state that the tongue is drawn into the lower pharynx and the pharynx is narrowed transversely by inward movement of the inward walls. This gives us the clue that the hyoglossus is involved in the repression and retraction of the tongue and that the pharyngeal constrictors narrow the pharynx at and below the constriction.

The amount of freedon available for varying the constriction location is still a problem. The sphincteral node of the palatoglossus will narrow the vocal tract locally in /ɯ/. If the styloglossus and palatoglossus together guide the tongue into position for /ɯ/, little freedom should remain for varying the constriction location. For the palatal vowels there are no muscles that contract across the anterior part of the vocal tract to pull the tongue up into position. The tongue has to be pushed up from below, which leaves greater freedom for determining the target of the movement.

These four locations divide the spectral space into four vowel quality families. The boundaries between the four families constitute the basic phonemic constrast. In the three-phoneme systems such as Kabardian (Halle, 1970), there is a constrast between:

a) / ʌ / - like vowels with low pharyngeal constrictions;

b) spread - lip /ɪ - ɛ / - like vowels with palatal constrictions and rounded /ɯ - o/ - like vowels with velar and upper pharyngeal constrictions.

Other modifications are used for additional constrast: the degree of constrictions , the degree of mouth opening, and the degree of lip rounding.

Finally this new approach to tongue articulation gives a comprehensive approach to tongue vowel production because each of the successive stages (neuromotor cavity, shaping spectral output) are unambiguously related to each other. The tongue arch model is ambiguous in this respect and "constitutes a capricious medium for relating the different phases of speech production " (Wood, 1977, p.128).

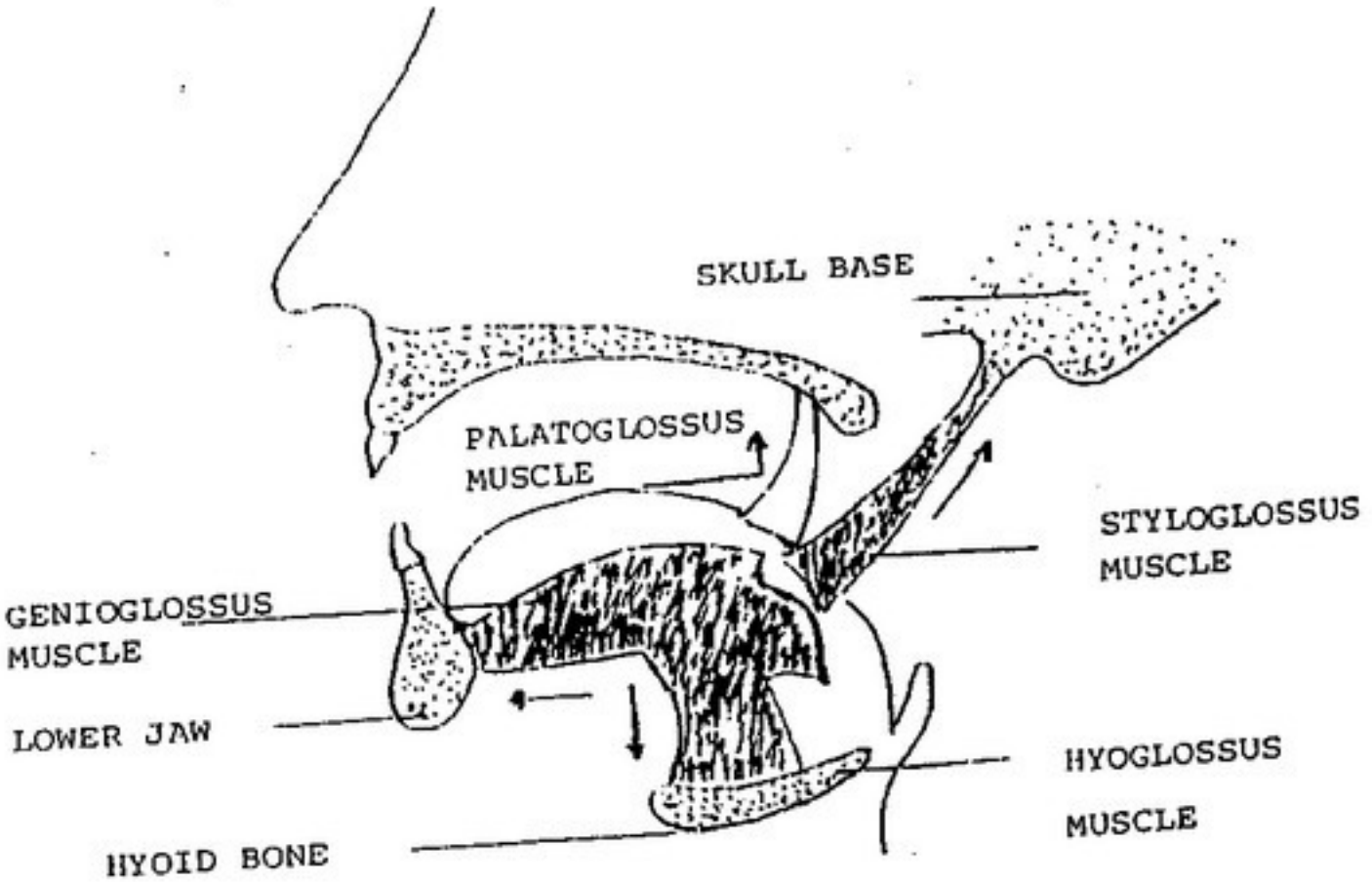

Figure 1. *Schematical drawing of the extrinsic muscles of the tongue. (Original drawing by Gustavsson).*

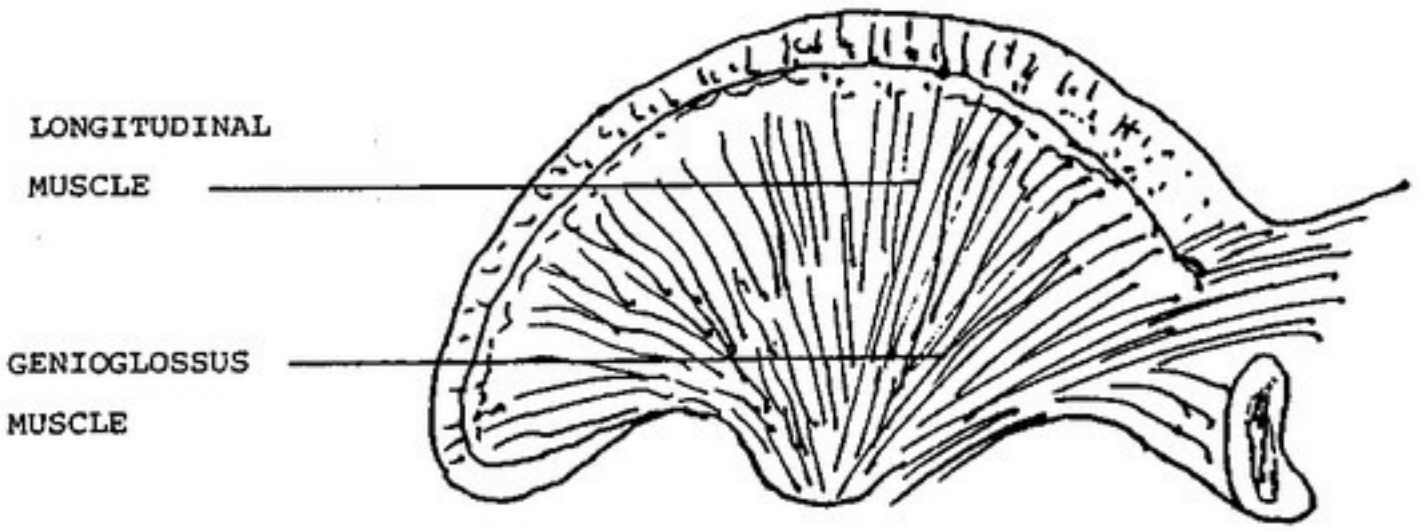

Figure 2. *The intrinsic muscles of the tongue.*

(from Sobotta - Beacher, 1957).

TENSE AND LAX VOWELS.

The terms tense and lax have been used differently in the literature of the speech sounds. Bell (1867) used "primary" for "tense" and "wide" for "lax". "Wide" referred to presumed pharyngeal width. Sievers (1901) chose "tenseness" to prevent possible confusion between "width" and tongue height classification. Sweet (1971) replaced Bell's term "primary" with "narrow", opposing "narrow" to "wide", keeping the point of view that pharyngeal width is responsible for the distinction. Jacobson and Halle (1968) considered the terms "tense" vs. "lax" from the acoustic and genetic points of view. Acoustically: longer (vs. reduced) duration of the state portion of the sound and its sharper defined resonance region in the spectrum; and genetically: a deliberate (vs. rapid) execution of the required gesture resulting in a lastingly stationary articulation; greater deformation of the buccal tract form its neutral, central position. The difference between tense and lax sounds parallels that between notes "legato" and "staccato", respectively.

There is both a phonological and phonetic ambiguity in the terms "tense" and "lax". One of the outstanding ambiguities is concerned with the physiological and acoustic character of the contrasts. It is due to the limited knowledge we still have of the production involved. A serious one is the confusion of tenseness and laxness with vowel length or quantity. Tense vowels are said to be longer than lax vowels because of the tense gestures taking more time to execute. It is an actual fact that in many languages tense vowels are long and lax short. The relationship between tenseness and quantity can vary synchronically from language to language and diachronically from period to period in one and the same language.

The latest scientific considerations show that there are differences of both the degree of tongue constriction and the volume of the lower pharynx between tense and lax vowels. The configuration of the vocal tract is modified by these factors and will consequently alter its resonance. It is necessary to know the magnitude of the acoustical difference that can be referred to any particular articulatory variable to have a complete account of the production of different vowel categories. For the description of the acoustic properties of the vowel tract, the nomograms published by Stevens and House (1955) and Fant (1960) based on the three-parameter model have been very helpful but it is difficult to relate the model parameters to specific articulatory manoeuvres in a number of situations. This was solved by the exploration of the acoustical consequences of lip, tongue, jaw and larynx movement (Lindblom and Sundberg, 1971). A midsagittal profile of the vocal tract is deliberately altered and the resonances of each configuration are measured, either by computer or with the aid of an electrical analogue.

Wood's (1975) experiments showed how much of the acoustical difference within pairs of tense and lax vowels could be attributed to the degree of constriction and how much to the pharyngeal volume. X-rayed vowel articulations revealed consistent differences of both degree of constriction and of pharyngeal volume between tense and lax vowels. There are also differences of lip position (less rounded, sometimes less spread, for lax vowels) and larynx position (deeper for tense vowels, especially for rounded vowels). There is a universal physiological and biological basis for the acoustical contrasts founded on this difference.

The degree of constriction is quantified as the cross-section area of the vocal tract at the tongue constriction. There is considerable similitary of constriction size for similar vowel qualities irrespective of language. Each pair of vowels is characterized by a widening of the constricted passage by 3-4 mm for the lax vowels. The exception is the /ɒ - ɔ/ pair where the lax vowel just has the narrower constriction although both ranges virtually overlap. In the case of /ʊ/ when the velar passage is widened beyond 2.0 mm, the back of the tongue begins to constrict the upper pharynx. For the pairs /ʌ - ɪ/, /e - ɛ/, /ɯ - ʊ/ and /ɒ - ɔ/, there are corresponding differences in the lower pharynx.

In the case of /ə - ɑ/, the lower pharynx is constricted by the tongue so that variation of low pharyngeal width modifies the constriction itself: the tense vowel /ɑ/ has the narrower pharynx.

The differences of degree of constriction and low pharyngeal volume are due to the movement of the tongue which must be broken into its lingual and mandibular components. The tongue constriction is formed by directing the tongue itself towards:

a) the hard palate /i - ɪ/; /e - ɛ/

b) the soft palate /ɯ - ʊ/;

c) the upper pharynx /ɒ - ɔ/; and

d) the lower pharynx /ɑ - ə/; at the same time there is a raising or lowering of the tongue body by the jaw.

This contributes to the constrictions made against the roof of the mouth for the palatal and palatovelar vowels. Mandibular movements do not affect constrictions in the pharynx. The jaw occupies two relevant positions during vowels:

a) a closer opening of 5 -10 mm. for /i - ɪ/ - /u - ʊ/ - like vowels, and

b) a wider opening of 11 - 16 mm. or more for /e - ɛ/ - /o - ɔ/ - /ɑ - a/ - like vowels.

It depends on articulation rate and speaking effort. The tongue compensates for the freedom of jaw movement in order to maintain a suitable palatal or palatovelar constriction size; this lingual compensation is not necessary for the pharyngeal constrictions but the lips compensate for variation of jaw position in all rounded vowels.

Halle and Steavens (1969) and Perkell (1971) reported that the root of the tongue is further forward for tense vowels than for lax. As a result of the advances of the tongue root there is a widening of the lower pharynx and an increase of its volume; there is also a raising of the tongue body which is in the direction of the constriction in the case of the palatal and palatovelar vowels. The muscles that would pull the tongue root forward are posterior fibres of the genioglossus; they are also in connection with the raising of the tongue. This is necessary for all vowels with a constriction against the roof of the mouth /i - ɪ/ - /e - ɛ/ - /u - ʊ/.

For the vowels with constricted pharynx / o - ɔ /, /ɑ - a /-, constriction of the posterior fibres of the genioglossi would be contrary to the rearward constriction - forming gestures.

The physiological and articulatory difference between tense and lax vowels lies in varying the degree of constriction of a muscle that is already involved for a pair of vowels such as the posterior genioglossus for the constriction of the palatal and palatovelar vowels and for keeping the lower pharynx open in the velopharyngeal vowels and the hyoglossus for the constriction of the low pharyngeal vowels. There are also differences of tongue blade depression and tongue bunching aids on controlling the constriction against the roof of the mouth. For the palatovelar and velopharyngeal vowels, tongue blade depression enlarges the buccal cavity. The spectral constrast is favoured by these effects. There is also distributional differences between tense and lax vowels; lax vowels do not occur in final open syllables (Mackay, 1977). The tenseness distinction is more noticeable among the high and mid vowels than among the low vowels (Heffner, 1949; Sweet, 1971).

[1]TABLE: 1.

CONSTRICTION	HARD PALATE		SOFT PALATE	UPPER PHARYNX	LOWER PHARYNX
VOWEL PAIR	ɪ / i	e / ɛ	ʉ / ʊ	ɒ / ɔ:	ɑ: / a
TENSE VOWEL	0.5 -1.0	1.0 - 1.7	0.5 -1.0	0.6-1.0	0.5 -1.0 CM2
LAX VOWEL	1.6 - 2.2	2.5 - 3.0	1.5 -	0.4 - 0.7	1.3 -1.7 CM2

[1]**Table 1.** Cross-section area of the vocal tract at the tongue constriction, representing the degree of constriction. The tense vowel has the narrower constriction, except for the pair.

	PALATAL	VELAR	VELOPHARYNGEAL	LOW PHARYNGEAL	TENSE	LAX
/ i: /	*				*	
/ I /	*					*
/ e /	*				*	
/ ɛ /	*					*
/ ɯ /		*			*	
/ ʊ /		*				*
/ o /			*		*	
/ ɒ /			*			*
/ ɑ /				*		*
/ ɑ /				*	*	
/ æ /				*	*	
/ ɜ: /				*		*
/ ʌ /				*		*

GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH VOWELS.

INTRODUCTION

After having applied the Identification and Discrimination Tests (Manrique-Valencia, 1980) to three groups of different levels in three different occasions, we were able to draw out a list of English vowel sounds, taking into account the degree of difficulties for the Spanish speaking student, from the highest to the lowest, giving in each case the reasons of these difficulties and a chart comparing them with the River Plate Spanish vowel sounds. This classification and the exercises given for each sound will help the teachers grade the teaching of vowel sounds and allow their students to an awareness of such difficulties and consequently improve their production of sounds completely different in most cases from the sounds of their mother tongue. At the same time it will also help the teacher to know the gradation and the order he or she has to follow in order to teach the foreign sound.

PROCEDURE

Three groups of ten undergraduate students of the Teaching Training Course at "Universidad del Salvador" participated as listeners (Ss). The Ss. of the first group (I) were first year student, those of the second one (II) were third year students and those of the third one (III) were fourth year students.

Both tests were given at the laboratory of the School of Modern Languages of "Universidad del Salvador" through earphones, in three different sessions for each group with a period of three months between each session.

For the Discrimination Test, a test of the ABX type was used (Manrique-Valencia, 1980), where the listener is presented with the stimuli in succession. The first two stimuli are always different, the third stimulus is identical with either the first or the second stimulus in the triad. The listener is required to indicate whether the third stimulus is more like the first one or more like the second one. In the test tape used in this experiment the stimuli within each triad were separated by one second while successive triads were separated by five seconds. After every ten triads there was and additional ten-second pause.

For the Identification Test, a list of eleven English vowels in h/d context was prepared. In this list each vowel was repeated four times at random with a three second interval between each vowel, and with an eight second interval after ten vowels.

The reasons for the periodic application of these tests is to allow the evaluation of the progress of each student at three different stages in his learning process.

After the application of both tests we were able to generalize and state a hierarchy of difficuties and give the exercises to improve the production of the G. B. English vowels sounds.

RESULTS - HIERARCHY OF DIFFICULTIES OF GENERAL BRITISH ENGLISH VOWEL SOUNDS.

The English vowel system differs from the Spanish one not only because of the number of categories but also because of their distribution in the spectral area delimited by the value of frecuency of F1 and F2. Manrique and Guirao (1976), showed that only English vowel / ɹ: / has in both formants a good spectral coincidence with the Spanish / i /, meanwhile in the other vowels the agreement is only partial.

For both static and dynamic vowels the hierarchy was set comparing each of them with River Plate Spanish vowels. At the same time their distributions in the syllable have been given as well as a set of exercises to be used for practice.

CONTRAST BETWEEN GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH STATIC VOWELS.

ENGLISH		SPANISH	
/ɹ:/	Palatal F1: 400 mels. F2: 1.700 mels.	/i/	Palatal F1: 400 mels. F2: 1.800 mels. Good spectral coincidence.
/I/	Palatal F1: 500 mels. F2: 1.600 mels.		No correspondent.
/e/	Palatal F1: 650 mels. F2: 1.550 mels.	/e/	Palatal F1: 550 mels. F2: 1.700 mels.
	No correspondent. (only as first element of diphthong).	/ɛ/	Palatal F1: 800 mels. F2: 1.500 mels.
/ɜ:/	Low Pharyngeal F1: 650 mels. F2: 1.250 mels.		No correspondent.
/æ/	Low Pharyngeal F1: 800 mels. F2: 1.450 mels.		No correspondent.
/ʌ/	Low Pharyngeal F1: 800 mels. F2: 1150 mels.	/a/	Low Pharyngeal F1: 950 mels. F2: 1.250 mels.

ENGLISH		SPANISH	
/ɑ:/	Low Pharyngeal F1: 750 mels. F2: 1.050 mels.		No correspondent.
/ɯ:/	Velar F1: 400 mels. F2: 1000 mels.	/ɯ/	Velar F1: 450 mels. F2: 750 mels.
/ʊ/	Velar F1: 500 mels. F2: 1050 mels.		No correspondent.
/ɒ/	Velopharyngeal F1: 700 mels. F2: 950 mels.	/o/	Velopharyngeal F1: 850 mels. F2: 950 mels.
/ɔ:/	Velopharyngeal F1: 550 mels. F2: 800 mels.		No correspondent.

DISTRIBUTION OF GENERAL BRITISH ENGLISH STATIC VOWELS

/ iː / Palatal

Initial position: /iːzˌ/ ease

/ˈiːstʲə/ Easter

Mid position: /siːzˌ/ seas

/ˈpʰiːtʲə/ Peter

Final position: /pʰˌliː/ plea

/ˌəʊvəˈsiː/ oversee

/ ɪ / Palatal

Initial position: /ɪt̠/ it

/ˈɪnə/ inner

Mid position: /kʰɪt̠/ kit

/lɪtʲə/ litter

Final position: /mɪ/ me (weak form final position)

/ˈbeɪbɪ/ baby

/ e / Palatal

Initial position: /ɛnd̥/ end

/ˈɛtb̥ɐʊ/ elbow

Mid position: /lɛt/ let

/ˈsɛtɐ/ setter

Final position : Nonexistent

Diphthongized when pronouncing a foreign word /ˈkʰæfeɪ/ café.

/ ɜ: / Low pharyngeal

Initial position: /ɜ:n̥/ earn

/ˈɜ:nɪst/ Ernest

Mid position: /lɜ:n̥/ learn

/pʰɜ:sn̥/ person

Final position: /pʰɜ:/ purr

/əˈkʰɜ:/ occur

/ æ / Low pharyngeal

Initial position: /æn̥t/ ant

/ˈætɪk/ attic

Mid position: /sɐnd̥/ sand

/ˈkʰæ n ə tˀ/ cannot

Final position: Nonexistent

/ ʌ / Low pharyngeal

Initial position: /ʌpˀ/ up

/ˈʌtˀə/ utter

Mid position: /kʰʌtˀ/ cut

/ˈlʌkˀɪ/ lucky

Final position : Nonexistent

/ ɑ: / Low pharyngeal

Initial position: /ɑ:skˀ/ ask

/ˈɑ: n̥ tˀɪ / auntie

Mid position: /kʰɑ:mˀ/ calm

/ˈfɑ: ð ə / father

Final position: /kʰɑ:/ car

/ˈɔ:tˀɑɹkˀɑ:/ autocar

/ ʉː / **Velar**

Initial position: /ʉːm̥f/ oomph

/ˈʉːzɪ/ oozy

Mid position: /b̥ɹʉːk̃/ brook

/ˈsʉːnə/ sooner

Final position: /jʉː/ you (strong form)

/ˈɪgˠl̥ʉː/ igloo

/ ʊ / **Velar**

Initial position: Nonexistent monosyllables.

/ˈʊmlaʊt̃/ umlaut

Mid position: /pʰʊt̃/ put

/ˈlʊkˠɪŋ̊/ looking

Final position: Nonexistent

/ ɒ / **Velopharyngeal**

Initial position: /ɒŋ̊/ on

/ˈɒŋwədʒ̊ᶻ/ onwards

Mid position: /lɒt͡ˀ/ lot

/ˈhɒt͡ˀə/ hotter

Final position: Nonexistent

/ ɔ: / **Velopharyngeal**

Initial position: /ɔ:t̪/ all

/ˈɔ:stˠrɪə/ Austria

Mid position: /sɔ:t͡ˀ/ sort

/ˈwɔ:kˠə/ walker

Final position /lɔ: / law

/ˈsiː sɔ: / seesaw

DISTRIBUTION OF RIVER PLATE SPANISH STATIC VOWELS

/ i̯ / Palatal

Initial position:	/ i̯ /	y
	/ˈi̯t̪o/	hito
Mid position:	/si̯n̪/	sin
	/ˈli̯so/	liso
Final position:	/ n̪i̯ /	ni
	/aˈsi̯/	así

/ e̞ / Palatal

Initial position:	/ e̞̯ /	el
	/ˈe̞so/	eso
Mid position:	/le̞s/	les
	/ˈse̞n̪a/	cena
Final position :	/ se̞ /	se
	/aˈme̞/	amé

/ ɛ / **Palatal**

Initial position: Nonexistent monosyllables.

/ɛˈɾɾɔɾ̥/ error

Mid position: /sɛɾ̥ɾ/ ser

/ˈpɛɾɾɔ/ perro

Final position : /ɾɾɛ/ re

/ ɛˈɾɾɛ / erré

/ ɑ / **Low pharyngeal**

Initial position: /aˈl̥/ al

/ˈamo/ amo

Mid position: /mal̥/ mal

/ˈkasas/ casas

Final position: /la/ la

/aˈka/ acá

/ ɯ / **Velar**

Initial position: /ɯn̥/ un

/ˈɯso/ uso

Mid position: /susi/ sus

/'puso/ puso

Final position: /tu/ tu

/karaku/ caracú

/ o / **Velopharyngeal**

Initial position: /osi/ hoz

/'ola/ ola

Mid position: /bosi/ vos

/'poso/ pozo

Final position: /lo/ lo

/'iso/ hizo

HIERARCHY OF DIFFICULTIES FOR A RIVER PLATE SPANISH SPEAKER IN THE PRODUCTION OF GENERAL BRITISH ENGLISH STATIC VOWEL SOUNDS.

1. /ɪ / Palatal lax.

2. /ɜ:/ Low pharyngeal lax.

3. /ʊ/ Velar lax.

4. /ɒ/ Velopharyngeal lax.

5. /ʌ/ Low pharyngeal lax.

6. /ɑ:/ Low pharyngeal tense.

7. /æ/ Low pharyngeal tense.

8. /ɔ:/ Velopharyngeal tense.

9. /ɯ:/ Velar tense.

10./ e / Palatal tense.

11./i:/ Palatal tense.

EXERCICES FOR THE APPLICATION AND PRACTICE OF GENERAL BRITISH ENGLISH STATIC VOWELS.

1- / I / sound.

trip	**carriage**	**villages**
sit	**mountains**	**luckily**
live	**valleys**	**languages**
in	**forests**	**oranges**
cliff	**women**	**bitterly**
kick	**damage**	**interesting**

- Six women visited the little windmill in the village.
- Bill's sitting near the river fishing.
- Jill missed the trip to the mountains and valleys.
- Timmy and Lizzie live on biscuits, coffee and honey.

2- /ɜ:/ sound.

fur	**certain**	**journalist**
work	**curly**	**permanently**
stir	**journey**	**earnestly**
hers	**searched**	**worldwide**
worth	**purpose**	**advertisement**

- It's her thirteenth birthday and a Thursday.
- They search for the purse among the ferns.
- Sir Burnes is a journalist of worldwide fame.
- It's the early bird that catches the worm.

3- /ʊ/ sound.

good	**woman**	**tomorrow**
bush	**July**	**understood**
cook	**couldn't**	**bull-fighting**
put	**shouldn't**	**cookery**
full	**footing**	**pushing**
took	**pudding**	**undertook**

- Look at the bull in the woods.
- He took the cushion and shook it.
- Give a good look at the cookery book.
- The woman couldn't put on her hood.

4- /ɒ/ sound.

John	**body**	**apologise**
lot	**doctor**	**astonished**
cough	**hospital**	**generosity**
wrong	**sorry**	**popular**
cost	**adopt**	**knowledge**
pond	**quarrel**	**responsible**

- There's a hot coffee-pot on the trolley.
- Bob locked the copper box.
- John's got a lot of copies of the songs.
- Tom, the frog on the log hopped into the pond.

5- /ʌ / sound.

hut	**enough**	**brotherhood**
blood	**money**	**another**
cut	**stomach**	**discovered**
son	**butter**	**sometimes**
flood	**honey**	**comfortable**
won	**monkey**	**thoroughly**

- I love buns with butter and honey.
- This bus runs on Sundays.
- She has two sons: one's lovely, the other's ugly.
- Mother cooked mutton for supper.

6- /ɑ:/ sound.

staff	**command**	**demanded**
guards	**army**	**advancing**
grass	**calmly**	**advantage**
charge	**started**	**Chancellor**
sample	**example**	**charmingly**
castle	**master**	**everlasting**

- The car was parked in the garage.
- A staff captain commanded the guards to advance.
- They marched calmly to the castle and started their charge.
- The army had the advantage of the grass near the castle.

7- /æ/ sound.

cat	**ladder**	**ambulance**
sack	**Japan**	**accident**
map	**language**	**magazine**
sad	**happened**	**mathematics**
bag	**matches**	**character**
lap	**banknotes**	**actresses**

- The cat and the rat sat on the black mat.
- Pam and Pat sang sad songs in Japan.
- The sack and the bag were by a ladder in the lab.
- The rabbit dashed from the sandy bank.

8- /ɔ:/ sound.

false	afford	extraordinary
George	cautions	already
warned	always	awkwardly
coarse	although	thoughtfully
roared	caution	waterish
law	glorious	altering

- George is extraordinary cautious when driving.
- Paul walked to the board in the hall.
- He informed of his talks with the four lawyers.
- I thought the gorge had been explored.

9- /u:/ sound.

move	nuisance	afternoon
cool	refuse	cartoon
soup	approve	saloon
truth	produce	truthfully
due	accuse	lunatic
school	grouping	boot

- A group threw a goose into a pool.
- It's usually cool in Susan's room.
- Use a ruler as you do at school.
- The lunatic zoologist gave soup to the kangaroos.

10- /e / sound.

bed	**again**	**terrible**
slept	**headache**	**yesterday**
read	**weather**	**medicine**
friend	**heavy**	**readily**
desk	**pleasant**	**chemistry**
guest	**many**	**leprosy**

- Ted led the treacherous peasants of the realm.
- Mend the fence when the weather's better.
- Meg guesses the treasure's buried ahead.
- It's terribly unhealthy to rest in a terrace.

11- /i:/ sound

meat	reading	magazine
see	asleep	evening
fields	between	easily
people	machines	convenient
these	keeper	secretly
steal	police	employees

- I believe the priest is preaching this week.
- These employees secretly read magazines.
- Peter's cleaning the green machine.
- He's feeding the geese beneath the trees.

RESULTS OF GENERAL BRITISH ENGLISH STATIC VOWELS IDENTIFICATION & DISCRIMINATION TESTS.

IDENTIFICATION TEST.

/ i: /	100%
/ I /	80%
/ e /	90%
/ æ /	95%
/ ɑ: /	100%
/ ɒ /	85%
/ ɔ: /	100%
/ ʊ /	95%
/ u: /	100%
/ ʌ /	70%
/ ɜ: /	65%

DISCRIMINATION TEST.

/i:-I/	73%
/I-e/	93%
/e-æ/	85%
/æ-ɑ:/	77%
/ɑ:-ɒ/	70%
/ɒ-ɔ:/	90%
/ʊ-u:/	60%
/ʌ-ɜ:/	80%
/ɑ:-ʌ/	80%
/ʌ-æ/	75%
/e-ɜ:/	33%
/ɜ:-æ/	96%
/ɒ-ʌ/	90%

CONTRAST BETWEEN GENERAL BRITISH ENGLISH AND RIVER PLATE SPANISH DYNAMIC VOWELS.

/ɪə/	Glides from a palatal advanced to a palatal retracted constriction		NO CORRESPONDENT
/ʊə/	Glides from a velar to a palatal retracted constriction		NO CORRESPONDENT
/əʊ/	Glides from a palatal retracted to a velar constriction		NO CORRESPONDENT
/ɛə/	Glides from a palatal advanced to a palatal retracted constriction		NO CORRESPONDENT
/ɔɪ/	Glides from a velopharyngeal to a palatal advanced constriction	/oĭ/	Same gliding but different spectral area.
/aʊ/	Glides from a low pharyngeal to a velar constriction	/aŭ/	Same gliding, same spectral area in the first element but different in the second one.

/aɪ/	Glides from a low pharyngeal to a palatal advanced constriction	/a i/	Same gliding but different spectral area.
/eɪ/	Glides from a truly advanced palatal to an advanced palatal constriction	/e i/	Same gliding, same spectral area of first element but different in the second one.

DISTRIBUTION OF GENERAL BRITISH ENGLISH DYNAMIC VOWELS.

/ ɪə / **sometimes** / jə /

Initial position: / ɪə / ear

/ ˈɪə ɹɪŋ / ear-ring

Mid position: / fɪəs / fierce

/ ˈnɪəlɪ / nearly

Final position: /dɪə/ dear

/ əˈpʰɪə / appear

/ ʊə / **monthongized into** /ɔː/

Initial position: Nonexistent.

Mid position: / kˈɹʊət / cruel

/ ˈpʰʊəɹə / poorer /ˈpʰɔːɹə/

Final position: /ʃʊə/ sure /ʃɔː/

/ ɪmˈpjʊə / impure /ɪmˈpjɔː/

/əʊ/

Initial position: /əʊts/ oats

/əʊ'eɪsɪs/ oasis

Mid position: /bəʊl/ boat

/'məʊldɪd/ moulded

Final position: /səʊ/ so

/ɔ:'ðəʊ/ although

/ɛə/

Initial position: /ɛə/ air

/'ɛəkraft/ air-craft

Mid position: /pʰɛə/ pare

/'mɛəɹɪ/ Mary

Final position: /bɛə/ bear

/ɪm'pʰɛə/ impair

/ɔɪ/

Initial position:	/ɔɪt̥/	oil
	/ˈɔɪs tˠə/	oyster
Mid position:	/pʰɔɪn̥t̚/	point
	/ˈhɔɪs tˠɪd̚/	hoisted
Final position:	/tʰɔɪ/	toy
	/ˈtʰɔɪ bɔɪ/	toy boy

/aʊ/

Initial position:	/aʊn̥s/	ounce
	/ˈaʊɫˠɪŋ/	outing
Mid position:	/pʰaʊnd̚/	pound
	/ˈlaʊdə/	louder
Final position:	/b̪aʊ/	bow
	/əˈlaʊ/	allow

/aɪ/

Initial position: /aɪs/ ice

/aɪˈdɪə/ idea

Mid position: /vaɪs/ vice

/ɹɪəˈlaɪz̥/ realize

Final position: /naɪ/ neigh

/əˈpʰɒlədʒaɪz̥/ apology

/eɪ/

Initial position: /eɪt̚/ eight

/ˈeɪpʸɹn̥/ apron

Mid position: /pʰeɪt̚/ pale

/ˈˈleɪtʸə/ later

Final position: /seɪ/ say

/əʊˈˈbeɪ/ obey

DISTRIBUTION OF RIVER PLATE SPANISH DYNAMIC VOWELS

/ oĭ /

Initial position: / oĭ / hoy

/ 'oĭʒa / oiga

Mid position: / soĭs / sois

/ 'koĭma / coima

Final position: / bo̞oĭ / voy

/ ehṭ̪oĭ / estoy

/ aĭ /

Initial position: / aĭ / hay

/ aĭ̥'laɾ̥ɾ / aislar

Mid position: / bo̞aĭs / vais

/ 'bo̞aĭle / baile

Final position: / paĭ / pai

/ uɾuˈʒwaĭ / Uruguay

/ eĭ /

Initial position: Nonexistent.

Mid position: / beĭs / veis

/ 'peĭne / peine

Final position: / leĭ / ley

Nonexistent in polysyllables.

/ aŭ /

Initial position: / aŭx / augh (onomatopoeic)

/ 'aŭla / aula

Mid position: Nonexistent in monosyllables

Addition of stress

Two static vowels

/ ba'u! / baúl

/ 'xaŭla / jaula

Final position: / ʧaŭ / chau (onomatopoeic)

Nonexistent in polysyllables.

HIERARCHY OF DIFFICULTIES FOR A RIVER PLATE SPANISH SPEAKER IN THE PRODUCTION OF GENERAL BRITISH ENGLISH DYNAMIC VOWELS SOUNDS.

1. /ɪə/ Palatal advanced to palatal retracted gliding.

2. /ʊə/ Velar to palatal retracted gliding.

3. /əʊ/ Palatal retracted to velar gliding.

4. /ɛə/ Palatal advanced to palatal retracted gliding.

5. /ɔɪ/ Velopharyngeal to palatal advanced gliding.

6. /ɑʊ/ Low pharyngeal to velar gliding.

7. /ɑɪ/ Low pharyngeal to palatal advanced gliding.

8. /eɪ/ Truly palatal advanced to palatal advanced gliding.

EXERCISES FOR THE APPLICATION AND PRACTICE OF GENERAL BRITISH ENGLISH DYNAMIC VOWELS.

1.- /ɪə/ Sound.

near	**various**	**disappear**
ear	**ideas**	**cheerfully**
deer	**clearing**	**engineers**
pier	**realize**	**atmosphere**
fear	**ideal**	**agreeable**
mere	**happier**	**volunteered**

- The idea of clearing the gears is ideal.
- The engineers have various years of experience.
- They really appear to be superior.
- Various deer cheerfully disappeared near the pier.

2- /ʊə/ ***Sound.***

brewer	**curious**	**luxurious**
tour	**jury**	**amateur**
lured	**furious**	**duration**
moor	**fluently**	**assuring**
cruel	**contours**	**furiously**
truant	**Europe**	**curiously**

- Fewer tourist visit Europe.
- A brewer's lured out of his luxurious car.
- Steward secured the renewal of the insurance.
- The centurion was inured to cruelty.

3- /əʊ/ ***Sound.***

own	**only**	**telescope**
robe	**poultry**	**bungalow**
oak	**alone**	**Rosemary**
brooch	**ago**	**moreover**
close	**rowing**	**nobody**
so	**plateau**	**loneliness**

- I won't ever go by boat.
- The postman's over the road.
- It's snowing. Don't go. Phone.
- The bold ghosts groan and moan in the old hotel.

4.- /ɛə/ Sound.

pair	**daring**	**scarcity**
rare	**hairy**	**everywhere**
chair	**parents**	**carefully**
care	**staircase**	**aeroplane**
share	**tearing**	**warily**
heirs	**aware**	**barbarians**

- Mary was carefully wearing a pair of rare shoes.
- My parents share their aeroplanes with all their heirs.
- We were aware that the barbarians could be everywhere.
- The hairy hare is more scared than the mare over there.

5- /ɔɪ/ Sound.

oil	**oyster**	**enjoyment**
choice	**exploit**	**employment**
boy	**recoil**	**annoying**
coin	**rejoice**	**boisterous**
joy	**poison**	**loyalist**
spoil	**moisture**	**devoicing**

- The boy spoiled his toys and coins.
- Anoint your joints with an oily ointment.
- I enjoy and rejoice oysters with oil.
- The boisterous employer enjoys exploiting his employees.

6.- /aʊ/ Sound.

now	**fountain**	**allowance**
owl	**around**	**doubtingly**
mouse	**thousand**	**housekeeper**
crowd	**trousers**	**confounded**
shout	**mountain**	**resounding**
loud	**scoundrel**	**boundary**

- John Brown's been to town.
- He has a bouncing hound who covers the ground by bounces.
- I haven't found out how much Brown paid for that owl.
- We heard a resounding shout around the mountain.

7.-/aɪ/ Sound.

mind	**delight**	**rewriting**
rhyme	**piper**	**bicycle**
isle	**shiny**	**advertise**
tie	**surprise**	**idealistic**
aisle	**silence**	**acquiring**
thigh	**migthy**	**requiring**

- A kind of white kite's flying in the sky.
- The blind guy's crying and sighing.
- The shy siren's lying under the mild sunshine.
- The pious Irish wife hired a tricycle.

8- /eɪ/ Sound.

ale	**earthquake**	**contemplate**
eight	**favour**	**basement**
waste	**amaze**	**estimate**
main	**ancient**	**arrangement**
cradle	**major**	**shoemaker**
vein	**basin**	**painfully**

- Our maid Maisie never breaks plates.
- The apes play chasing and shaking their tails.
- Dame Grace was embraced by Major Gray.
- They arranged to take the table away.

EXERCISES FOR THE APPLICATION AND PRACTICE OF GENERAL BRITISH ENGLISH STATIC AND DYNAMIC VOWELS.

Homonyms spelled differently and different words spelled the same.

1. Which one won?

2. I don't hear him singing the hymn.

3. Would you get some more woods?

4. Give Barbara a piece of cake just to keep peace.

5. At least we leased the house to a quiet couple.

6. I wrote the formulas and then learned by rote.

7. He did not cite love at first sight as the reason for choosing this site.

8. Please write down the right way to perform the rite.

9. The maid made some tea.

10. The lion's mane is one of his main distinguishing characteristics.

11. I don't remember having seen this scene before.

12. Does this seam seem strong?

13. That's the Mitchells' son playing in the sun.

14. We gave two prizes to Harold, too.

15. Don't peek at the lunch till you get to the peak.

16. He was weak for a week.

17. Have you heard the tale of the rabbit's tail?

18. You might speak a mite more quietly.

19. This is the biggest load of silver from the lode.

20. Tommy ate eight pancakes.

21. They're going there with their parents.

22. I couldn't bear to hear the bare facts.

23. I can't hear from here.

24. Please pare us a pair of pears.

25. A can of beer was on the bier.

26. The fisherman tried to peer under the pier.

27. My sister found a dear little baby deer.

28. No one heard the elephant herd.

29. How much is the bus fare to the fair?

30. Civil War soldiers wore blue uniforms.

Read the following description.

Lynton is poised on a cliff six hundred feet above Lynmouth, amidst superb Exmoor scenery including the magnificent Valley of the Rocks and restful woodland walks beside the East Lyn River.

Once the centre of a prosperous herring industry, Lynmouth became a popular resort during the Napoleonic wars.

Lynton was 'discovered' by the poets Shelley, Wordsworth and Coleridge in the 19th. century, and there is still a working water-powered cliff lift connecting the villages.

Read the following as fluently as possible.

Rat á l'orange.

The only way to figth China's growing rat pest problem is to open rat meat restaurants and to promote the rodents as a gourmet dish, according to the Economic Information newspaper.

An estimated three to four billion rats eat fifteen million tones of grain a year in China and annual pest-control drives have failed to stop damage, it said in an article quoted by China Daily.

Passages.

- One of the unhealty and disruptive tendencies in virtually all the developing countries is the emergence, in an ever more accentuated form, of the "dual economy", in which there are two different worlds. It is not a matter of some people being rich and others being poor, both

being united by a common way of life: it is a matter of two ways of life existing side by side in such a manner that even the humblest member of the one disposes of a daily income which is a high multiple of the income accruing to even the hardest working member of the other. The social and political tensions arising from the dual economy are too obvious to require description.

(from "Small is Beautiful" by E. F. Schumacher).

- Anyone who has suffered from the effects of an impending thunderstorm will need no introduction to ions and their action upon the human system. Lethargy, dizziness, headache and even bouts of depression can all have their origin in these tiny invisible electrical particles that are always present in the atmosphere. On a more prosaic level, modern furnishing fabrics, air-conditioning and the increasing use of high technology electronic equipment all help to create a hich level of positively-charged ions in an office environment.

- The afternoon "Office Blues" may not always be due to lunchtime activities! Similar conditions in the home can be aggravated by cigarette smoke, pollen and dust in suspension in the air. The Davis Ionisers are designed to restore the atmospheric "balance" by emitting a constant stream of negatively-charged ions which both attract and neutralise their counter-parts to produce an environment more conducive to alertness and well-being. Similarly, cigarette smoke, pollen and dust particles are neutralised and tend to be carried floorward rather than remaining suspended.

- Fowey has been a busy port since the Middle Ages. It is a delightful old town with narrow streets running steeply down to quays where pirates and smugglers once unloaded their cargoes. Nowadays the harbour is full of fishing boats and pleasure craft, though ocean-going ships still use the port to take on china clay. Across the wide harbour is the village of Polruan, connected to Fowey by a passenger ferry. Fowey today is a yachtsman's paradise and nearby sandy beaches and spectacular cliff-top walks make it an ideal centre for visitors.

- *Bird Brained.*

A year-long search by a British naturalist, Dick Waitling, in Fiji, for a bird thought to be extinct ended when it crashed on his head. The bird, known as NacGillivray's petrel, was recorded for the first and last time a hundred and twenty years ago. Mr. Waitling lured one in at night from the sea using flashlights and recordings. It crashed on his head and after examining the bird he let it go.

- *Looe, Cornwall.*

Looe has remained largely unspoiled over the centuries. East Looe and West Looe, which were first granted charters in the 14th. century, stand on either side of narrow estuary linked by ancient bridge. The people of the area originally depended on seafaring, fishing and smuggling for their livelihood. Nowadays, however, the town welcomes holidaymakers attracted by the captivating charm and tranquillity of the place and by the sandy beach at the mouth of the river. Both the beach and the harbour are protected by a stone jetty known as the Banjo Pier because of its shape.

- The Longman Dictionary of Contemporary English is a completely new dictionary prepared mainly for teachers and students of English, which will also prove stimulating to all those interesed in language.

The dictionary documents the English language as it is used throughout the world today, with particular emphasis on Britain and the United States. Its aim is to analyse the meaning and grammatical behaviour of each word as clearly and accurately as possible.

ANOTHER DAY

Boys shout,
Girls giggle,
Pencils write,
Squiggle squiggle.
Get it wrong,
Cross it out,
Bell's gone,
All out!.
Balls bounce,
Hands clap,
Skipping ropes,
Slap slap.
Hand-stands,
By the wall, Sara Williams,
Best of all.
Boys fight,
Girls flee,
Teacher's gone
And spilt
His tea.
Clatter bang!
Big din,
Whistle goes,
All in!
All quiet,
No sound,
Hear worms,
Underground.
Chalk squeaks,
Clock creeps,
Head on desk,
Boy sleeps.
Home time,
Glory be,
Mum's got,
Chips for tea.
Warm fire,
Full belly,
Sit down,
Watch telly,
Bed time,
Creep away,
Cream until,
Another day.

(John Cunliffe)

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Abbreviations.

CONICET. Consejo Nacional de Investigaciones Científicas y Técnicas.

JASA. Journal of the Acoustical Society of America.

JIPA. Journal of the International Phonetic Association.

JSHR. Journal of Speech and Hearing Research.

MIT. Massachussetts Institute of Technology.

MIT - QPR. Research Laboratory of Electronics, MIT, Quarterly Progress Reports.